BUSINESS CASE STUDY

CITY OF NASHUA
Enterprise Resource Planning
Consulting Services

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ENTERPRISE RESOURCE PLANNING
BUSINESS CASE
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1. PROJECT IDENTIFICATION

ERP SYSTEM PROJECT	
Executive Sponsors	Mike Gilbar, Finance John Barker, Information Technology
Executive Steering Committee	Andrew Scribner-MacLean, Reading, MA Gregg Stephens, Citizens Bank Mark Waks, BAE Systems John Barker, Information Technology Bob Gabriel, Purchasing Mike Gilbar, Finance Brian McCarthy, Nashua Alderman Jim Mealey, Schools Karen Smith, Police Fred Teeboom, Nashua Alderman
Project Management Team	Rose Evans, Finance James Molony, Information Technology Kendra Baxter, Information Technology Jim Mealey, Schools Rick Farrenkopf, School Doreen Beaulieu, Payroll
Date Submitted	April 14, 2009

Purpose of the Business Case Document

A Business Case captures the reasoning for initiating a project, especially if significant resources, such as money or effort will be consumed.

We have chosen to present the ERP Business Case in a structured written document that provides information to support the City's need for change. It explains the problem and the opportunity, how the opportunity aligns to the City's goals, and provides the framework for informed decision making.

2. EXECUTIVE SUMMARY

THE PROBLEM

Over the past 28 years, the City of Nashua has created and maintained a custom municipal software from ADMINS, Inc. of Cambridge, Massachusetts, platformed on the OpenVMS operating system. Initial development was deployed on a VAX system and has evolved to currently being hosted on clustered HP servers running OpenVMS 7.2 for Alpha. There are approximately 284 individual user accounts in the system.

ADMINS has been utilized for all financial applications in the City; however, custom applications have also been created for almost every department. For several years the City has recognized that the migration and upgrade of these applications is necessary due to many factors, including:

- System Obsolescence – The operating system of ADMINS's OpenVMS platform is obsolete and nearing its end-of-life, estimated to be 2012. Servers and associated hardware are estimated to reach their end of life in late 2009.

- Maintenance – Limitations include the lack of external ADMINS programmers, increased difficulty, expense, and risk in maintaining and enhancing City applications, and a growing obsolescence of functionality, as well as the platform of the software. New applications cannot be readily integrated with existing ADMINS code. As the existing ADMINS knowledge base leaves the City (i.e.: those users and programmers who are proficient in ADMINS), there will be an increase in maintenance risks, as well as future training and migration costs.

OUR APPROACH

In 2008, the City issued a Request for Proposal (RFP) for Financial (ERP) Systems Consulting Services. An Executive Steering Committee (ESC) was appointed by the Mayor to assist with the evaluation of bids and to operate as the oversight and advisory body for the duration of the project. The ESC consists of representation from key departments/divisions within the City, including Finance, Information Technology, Schools, Purchasing, Police and two City Aldermen as well as four community members who have had experience with similar financial system migration projects. After review of the proposals, the ESC selected Schafer Consulting to conduct Needs Assessments and to gather Functional Requirements for the software selection and migration process, to develop a Business Case, and to write a clear, concise RFP that would enable bidders to thoroughly comprehend the needs of the City and elicit the most accurate information from vendors that would allow the City to evaluate the vendor's software against its documented requirements.

To support the Business Case, Schafer Consulting conducted a thorough needs assessment of the current systems, business processes, users' needs, reports and constraints. These current processes were documented in a combination of narrative format and process workflows in Visio diagrams (Please refer to Appendix A.) In addition, a requirements analysis was performed to measure the operational gap that exists between the City's current state and the "desired" future state, which would ensure:

- Mitigation of hardware and software obsolescence
- Compliance with all federal and local government regulations and generally accepted accounting principles
- Public trust in the financial statements of the City of Nashua
- Fiscal responsibilities over public resources
- Operational efficiency and effectiveness

This Gap Analysis, along with our proposed solutions and recommendation, will be discussed further in Section 11.

OUR FINDINGS

Current System Limitations and Challenges

The review and analysis performed by Schafer Consulting, as summarized below, confirms and validates the City's own concerns, as well as opinions expressed by City employees. We identified the following compelling drivers of change:

- **Obsolescence –** Both the City's software and hardware are nearing their end of life. This poses a dangerous threat to the City's financial data, as spare hardware parts may be difficult to locate when they are needed. If critical server parts cease to function, the entire ADMINS system will crash.

- **Lack of Available ADMINS Programmers -** External ADMINS programming resources are rare to non-existent, as the need for such skill sets has become nearly obsolete. This poses a great risk to the City, both in terms of support and training.

- **Manual Processes -** It is costly and inefficient for employees to perform a significant amount of their work using manual processes. Over 400 manual processes have been identified as workaround solutions or augmentations to the functionalities of the existing systems.

- **Sidebar Systems -** Inefficiencies in the systems have created the need to find workaround solutions through sidebar systems (such as Excel and Access) in order to improve personal productivity. These systems have formed isolated "islands" of data, which has resulted in redundant systems, duplicate data entry, and the need to reconcile the systems to mitigate the increased possibility of errors.

- **Lack of Integration -** The City uses multiple ancillary software products that handle various operations of their business. The data from these disparate products must be passed to and from the central financial system through nightly batch jobs or interfaces. This lack of comprehensive systems integration creates difficulties in managing data in multiple locations. The ability to collect, effectively analyze, and share information that supports decision making processes is compromised.

- **Highly Customized -** Many of the systems used by the City have been customized from the ground up in order to run the City's business. Although the customizations have allowed the current systems to function, they do not address systems upgrades to new technology or integration with new best of breed systems. Concerns in relation to customization include:

- ✓ **Localized Knowledge Base -** The people that helped develop and define the system requirements are the only people that can make the system work on an ongoing basis.

- ✓ **Technical Documentation -** Outside resources would have difficulty supporting the application because it is not thoroughly documented. The ADMINS documentation that exists is very general and doesn't address specific issues that may arise or the extensive customizations that have been developed

- ✓ **Business Processes** – Business processes were programmed into ADMINS to accommodate administrative needs in an expeditious manner, rather than based on best government practices.

- ✓ **Training -** Only a handful of employees with localized knowledge can train new employees. Furthermore, external training resources are minimal, expensive, and not entirely relevant to the City's instance of the ADMINS environment.

- **Inadequate Reporting Capabilities –** The current systems collect data, but have difficulty retrieving data for reporting purposes. In order to make an ERP system a strategic asset, the data that resides in the system needs to be output in a usable form in order to make timely and informed decisions.

- **Business Processes Dictated by System –** Since the development of the City's systems and business processes have evolved while the software has remained primarily static, a disparity now exists between the way the software was designed to operate and the current requirements of the City's business. The current systems lack the following capabilities:

  - ✓ **Workflow -** Workflow is the ability to set up and change process flows within the system. It includes many capabilities such as electronic routing of documents, event notification, and automated processes based on triggers. The City needs this flexibility to allow the system to evolve with future changes and mandates instead of allowing business processes to be dictated by the system.

  - ✓ **Document Management –** The City's current processes are paper-intensive. Employees spend valuable time walking to and from records locations and between the City functional units that are responsible for them to find, replace and share documents. In addition, the security of paper documents is limited to physical access restrictions, which are easily compromised and offer no opportunity to audit access.

- **Compliance -** The tools and functionalities in the current systems do not ensure compliance through automated processes with the Fair Labor Standards Act (FLSA), Family and Medical Leave Act (FMLA), and the New Hampshire Retirement System's reporting requirements.

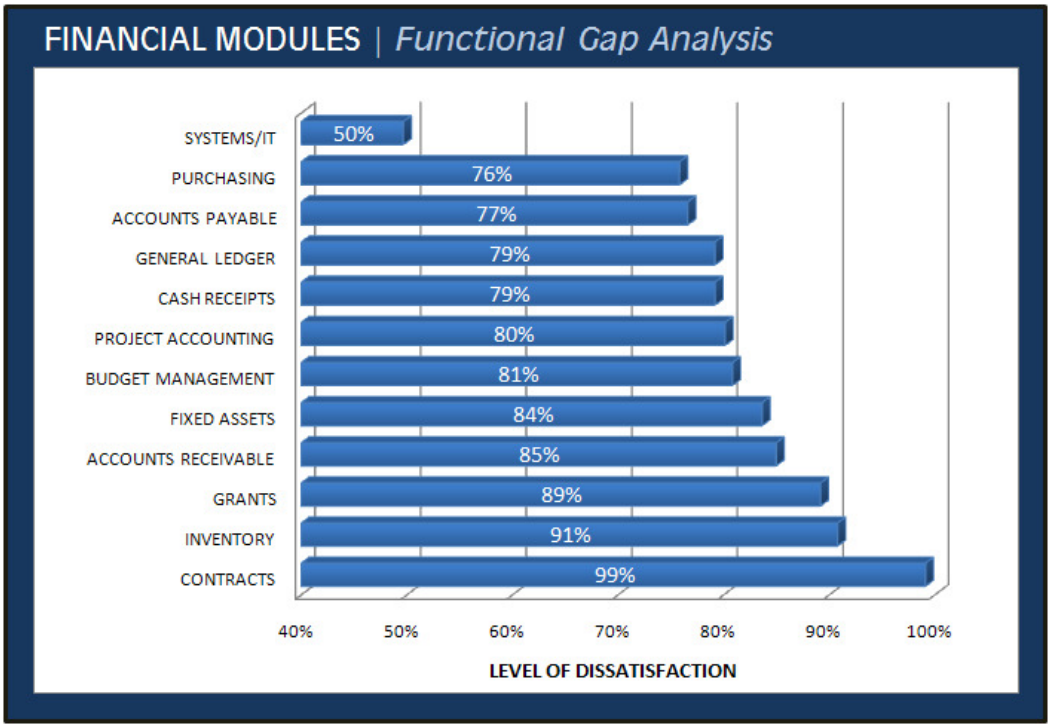
- **Limited Support of Deferred Compensation Contribution Calculations -** The current payroll system does not provide sufficient functionality to support automated corrections and adjustments to eligible earnings and contributions to deferred compensation plans.

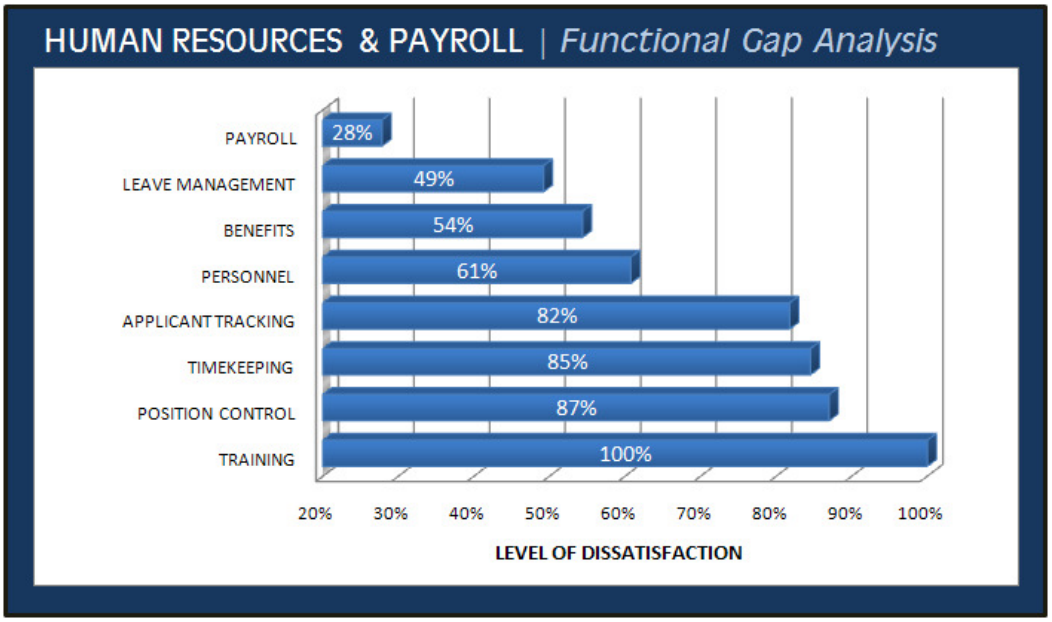
- **Audit Trails -** The current systems do not provide the ability to maintain audit trails to monitor changes to the data. In order for senior managers and internal auditors to certify that financial results accurately represent the financial condition and results of operations, complete confidence in the integrity of the financial data has to exist.

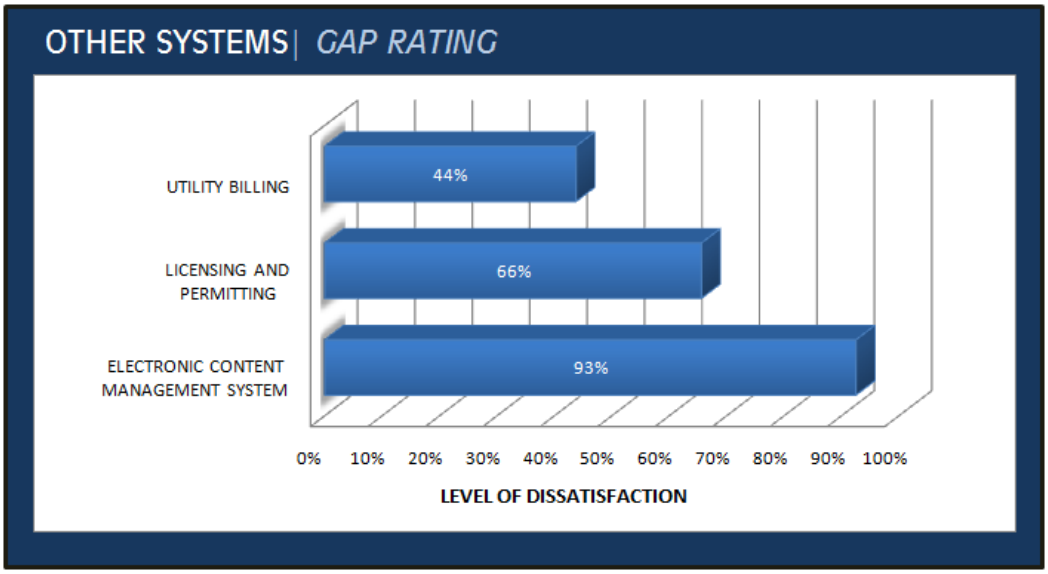
- **Inadequate Management of Records** – The City does not have the ability to readily retrieve and productively use business critical information on a daily or historic basis.

Gap Analysis Summary - How Well Does the Current System Meet the City's Needs?

The purpose of a gap analysis is to measure how well the City's business is being supported by technology. During our gap analysis/requirements workshops, we compiled system functionalities in key functional areas that were needed by City employees to perform their work. We asked the project implementation team, which consists of a group of cross departmental subject matter experts, to rate how well their current systems were meeting their needs. The following three bar graphs, Financial Modules, Human Resources/Payroll and Other Systems, illustrate the results of how poorly the requirements of the current systems measure up to what users would like to have available to them (i.e. the gaps that users experience using their current systems.) The higher the percentage measured, the greater the gap.







These ratings suggest that the City has not been 1) operating in an efficient and productive environment; 2) getting the most from its valuable employees; 3) strategically leveraging new technology; and 4) participating in initiatives for electronic collaboration with external partners such as customers, vendors, funding agencies, and other governmental agencies.

OUR OPTIONS

After systematically summarizing the results, Schafer Consulting has identified four options; along with their pros and cons. The first three options have already been considered by the City and are deemed to be inadequate to address the current state of technology emergency.

Each option is summarized below, with a more detailed analysis (including pros, cons and associated risks) discussed under Section 11.

- **Option 1** – **Status Quo** – The City does not take any action to upgrade or replace its existing systems. Although no immediate cash outlay is required under this option, it does not address any of the risks and constraints facing the City, including the impending obsolescence of system functionality and platform. In addition, the cost of maintaining outdated technology will be higher in the long run.
- **Option 2** – **Upgrade ADMINS** – Upgrade to ADMINS for Windows to achieve enhanced functionality and to mitigate the risk of obsolescence. Although the project investment of $125K for this option is relatively low, the outcome still will not address the City's functional gaps, constraints and underlying risks. At best, this option may extend the life of the current Open VMS platform by a few years, but it is a band aid solution and the City will still need to replace its current systems by 2012.
- **Option 3** – **Build a Customized ERP System** – Hire custom programmers to develop the system per the City's detailed specifications. This option may appear to allow for more flexibility, but its total cost of ownership could run from 3 to 10 times the cost of a "buy" solution, as all development cost (enhancements, upgrades, new documentation, and debugging) will be the sole responsibility of the City. The City's experience would be the only source of development, limiting it from the benefit of continual feedback from other customers, application user groups, the anticipation of unforeseen requirements, and the benefit of sharing costs. The true cost and effort will not be known for years, as a customized ERP will likely entail a 3-4 year implementation timeframe, as opposed to a 2-3 year timeframe for a COTS. In addition, the City would need to hire a much larger IT staff to develop and maintain the customized system. The City would also become highly dependent on these seasoned IT staff members as the sole resources with intimate familiarity and knowledge of the customized system.
- **Option 4** – **Replace the Current ERP System with Commercial off the Shelf (COTS) ERP Software Solution** – Initiate a RFP process to replace the current ERP system. *The new ERP system should be utilized by the entire City organization, including Schools, Fire and Police to attain data integration and financial transparency*. In addition, the City should expand the ERP replacement efforts to include an Enterprise Content Management System (ECMS), as well as a Licensing and Permitting System. A COTS ERP system alone will not eliminate all of the City's redundant and paper intensive processes.

  The City should prepare three separate RFP's to complete its objectives under the umbrella of the ERP project;

  - An ERP Financials RFP that is written in such a way as to encourage proposals from both point solution and ERP vendors, allowing the City the opportunity to compare functionality offered by both types of vendors in order to minimize functional gaps.
  - A Licensing and Permitting RFP that addresses manual processes and constraints in Parcel Management, Planning, Permitting, Inspection, Code Enforcement, and Licensing functional areas.
  - An ECMS RFP that includes the integration of an Electronic Document Management System (EDMS) with an Electronic Records Management System (ERMS). The purpose of this RFP is to implement an integrated approach to capture, maintain, store, access, dispose of and preserve electronic records, including those generated from the new ERP System.

  Option 4 is the only viable solution that would adequately address the City's immediate hardware and software obsolescence crisis. Furthermore, it would allow the City to eliminate many of its manual processes, create efficiency, leverage on new technology,

develop best business practices, improve data integrity and ensure the City exercises its fiduciary responsibility to the public and to its employees.

OUR RECOMMENDATIONS

Conclusion

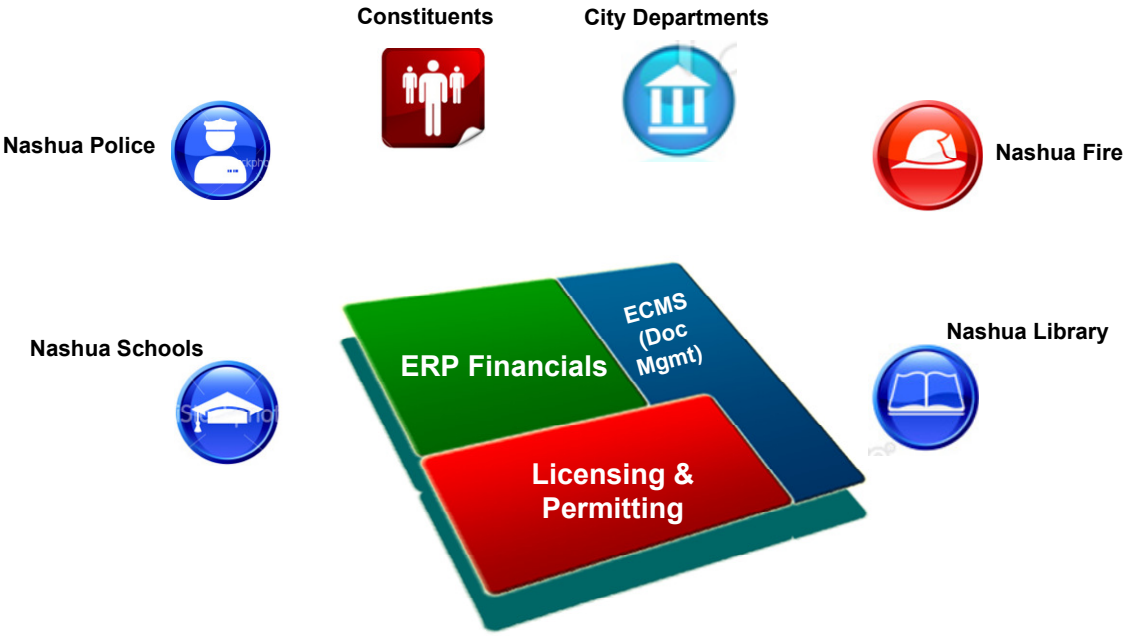
The conclusion of our Business Case indicates that the City is approaching a state of technology emergency as both software and hardware of the existing ERP system are nearing their end of life. This condition poses an unmitigated threat to the City's financial data and leaves the City unprotected and vulnerable. Furthermore, external programmers for ADMINS are almost non-existent, and as internal ADMINS resources reach their retirement, the City will be left with no system support.

The results of our analysis also indicate that employees who work with the current systems are relying on inefficient processes to complete their day-to-day tasks as a result of systems, and to some extent, operational constraints. Employees must frequently work around the system instead of working with it. Furthermore, there are significant gaps between what the current systems can do in comparison to the features of a new ERP system that either represent best government practices or features that users have identified as a requirement. These results indicate that it is not so much a matter of whether or not the City should move forward with the replacement of current systems, but rather when.

In light of these compelling conclusions, Option 4 was the best viable recommendation for the City. Without further delay, the City should initiate a series of RFP processes for the replacement of its existing ERP and Licensing and Permitting systems and to purchase an Electronic Content Management system that works in concert with all new and existing City systems as well City departments.

Option 4 will provide a robust system to serve the current and future needs of all the stakeholders listed in the diagram on the following page.

Who will use the new systems?



This option will provide the following benefits to the City:

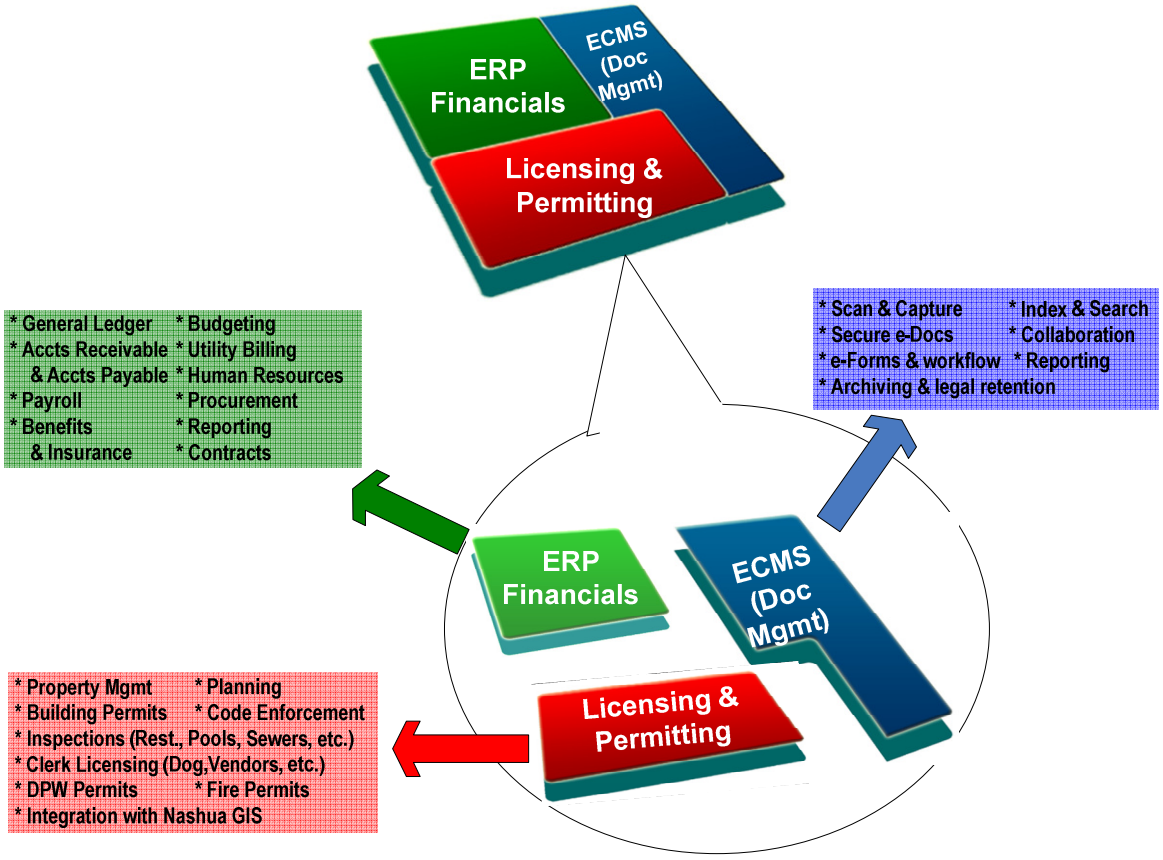
Employees	Technology	Process	Management
▪ Improve work efficiency ▪ Increase productivity ▪ Reduce employee stress ▪ Improve morale ▪ Build new skill sets	▪ Increase reliability and quality ▪ Reduce complexity and duplication of efforts ▪	▪ Reduce transaction processing times ▪ Eliminate non-value added tasks ▪ Minimize errors / rework ▪ Standardize processes ▪ Implement self-service and electronic workflow ▪ Implement government best practices ▪ Increase efficiency and productivity through a well managed records environment	▪ Improve decision support ▪ Improve efficiency and effectiveness ▪ Lower future operational costs ▪ React to mandates and other operational requests on a timely basis ▪ Meet legislative and regulatory requirements, including audits ▪ Protect public interest and trust ▪ Provide continuity of operations in an emergency or

			disaster
Infrastructure			
▪ Increase future scalability, flexibility and agility ▪ Enable incremental change at lower cost			

What is included in this project?

For planning, procurement, and implementation purposes, this project has been functionally broken down into three distinct but interrelated subcomponents. 'ERP Financials' represent the traditional ERP modules related to essential financial and personnel management, including General Ledger, Budgeting, Accounts Payable, Accounts Receivable, Payroll, HR, Procurement, etc. 'Licensing & Permitting' includes the inspection, review, licensing, and enforcement activities performed by the City Clerk, Public Works, Planning & Community Development, Public Health, Fire Marshall, etc. in managing the safety and accountability of the City. Lastly, the Electronic Content Management System '(ECMS)', sometimes referred to colloquially as document management, will help fulfill the promise of improved efficiencies and productivity by automating the storage, locating, collaboration, and flow of data and official documents between current and upgraded systems and staff. The diagram below illustrates these major components and provides a high-level outline of their functional role in the new systems.

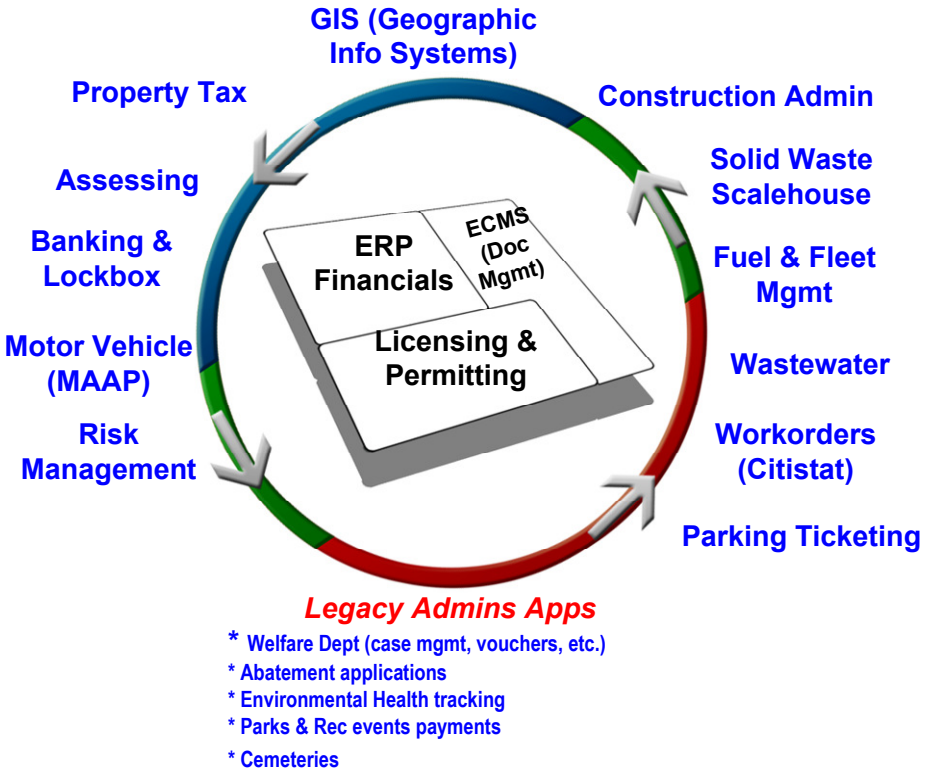
The Three Components of our Systems Modernization Project



What is not included in this project?

While the scope of this project is large, and the stakeholders include most of the City, there are some existing applications that are not a part of this systems modernization project. These are existing applications that have been migrated or upgraded previously from ADMINS to new COTS applications and will need to be integrated into one or more components of the new project infrastructure. In addition, there are some minor applications in ADMINS that will be retained on the old obsolete systems until the project is almost complete, such as Welfare Case Management, Parks & Recreation payments, Cemeteries, etc. Once the major project components have been implemented, these minor ADMINS utilities will be migrated to other non-ADMINS applications. The diagram below illustrates many of these existing applications that will be integrated with the new systems.

Existing Applications to be Integrated



NOTE: The applications illustrated have been migrated or upgraded previously from ADMINS (excluding legacy ADMINS programs) and are *not* being replaced by the Systems Modernization Project. These applications *will be* integrated into one or more components of the new project infrastructure. Legacy ADMINS applications will be migrated in the latter half of the project to new or existing off-the-shelf or free applications.

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Breakdown of Costs

A Capital Investment Cost calculation has been developed for each of the subcomponents of Option 4, which includes hardware, software licenses, implementation services and outsourced services. In addition, we also developed cost estimates for ongoing support and maintenance fees. These ongoing costs represent the annual cost of maintaining the systems and are not part of the initial capital investment. Capital Investment Costs are summarized below:

COST BY SUBCOMPONENT	External Cost
ERP	$ 5,570,273.50
Licensing & Permitting	$ 1,268,437.50
ECMS	$ 671,962.50
Total External Costs - Bondable	**$ 7,510,673.50**

COST BY CATEGORY	FY 2010	FY 2011	FY2012	FY2013	FY2014
Internal IT Support	$ -	$ 207,000.00	$ 213,210.00	$ 219,606.30	$ 226,194.49
Annual Maintenance (based on industry standard of 20% of software license fee)	$ 360,000.00	$ 378,000.00	$ 396,900.00	$ 416,745.00	$ 437,582.25
Anticipated ERP vendor services for configurations, testing of software upgrades and customization (based on 10% of the original implementation fee. Only 50% is anticipated to be incurred in FY2011)	$ -	$ 137,500.00	$ 275,000.00	$ 275,000.00	$ 275,000.00
Less: Savings from annual maintenance of current systems	$ -	$ -	$ (21,000.00)	$ (21,000.00)	$ (21,000.00)
Total Ongoing Cost by Year	**$ 360,000.00**	**$ 722,500.00**	**$ 864,110.00**	**$ 890,351.30**	**$ 917,776.74**

The total Capital Investment Cost of Option 4 requires cash outlay of approximately $7.5 million; 50% of which is expected to be expended during FY2010, 44% during FY2011, and the remaining 6% thereafter. In order to meet the cash requirement of the project, a schedule of funding flow for the project is provided below.

Funds Expended	Bond Issued	Cost Element	Amount
FY2010	6/15/10	Hardware	$ 720,000.00
FY2010	6/15/10	Software & Services	3,080,000.00
FY2011	12/15/10	Software & Services	3,300,000.00
FY2011 & After	6/15/11	Services	400,000.00
Total Funding			**$ 7,500,000.00**

Please note that there are many variables which could impact the cost, many of which are not necessarily known at this point, but which may have a direct bearing on the ultimate costs (please refer to Section 10 for detailed description of these variables).

Benefits

There are approximately 300 employees, whose job responsibilities will be impacted by the replacement of the new systems, including employees performing their jobs in the areas of accounting, budgeting, purchasing, contracting, accounts receivable, accounts payable, payroll, personnel, capital assets, grants, licensing, permitting, etc. The Business Case reveals that a system replacement will help these employees become more efficient and effective in their work.

In addition to financial benefits, many non-financial benefits could be realized. These include improved service to citizens and City personnel, improved internal controls, improved data integrity, better analytical and reporting tools for decision making, more unified technology, and seamless integration.

3. SUPPORT THE CITY'S BUSINESS OBJECTIVES

The City must ensure its business objectives are aligned with its strategic goals and strive for financial transparency throughout the organization and the community at large, as recommended by Sarbanes-Oxley. Financial transparency can be achieved through a combination of improved technology and/or efficient administration of the services offered by the City. A core management tool in the administration of the City's services is an integrated technical environment to support the management and processing of day-to-day City activities; ensuring that operational information is managed accurately; and in providing real time data to support the decision making processes of the City.

In order to effectively manage its operations, the City seeks to meet the following business objectives:

- Align the initiatives of individual City Departments with City-wide strategic goals
- Incorporate operating principles that minimize the cost of government and reduce financial risk
- Streamline processes to ensure the legal use of financial resources through an effective system of internal controls
- Create a sustainable framework for integration of the ERP system with other key applications
- Enhance the management of operations, strategic decision making and planning capabilities
- Promote sound financial management by providing accurate, timely information to City management and other decision makers
- Support the re-engineering of management processes
- Generate efficiency and productivity benefit
- Reduce the amount of paperwork by transitioning from paper-based to digital record keeping environment;
- Increase web-based services
- Provide accessible, user-friendly administrative support services
- Improve information access/reporting
- Reduce manual processes
- Eliminate any duplicative processes that do not provide any added value
- Improve data security
- Improve the safeguarding and management of assets
- Increase documentation on policies and procedures
- Provide audit trails
- Provide for performance reporting
- Streamline planning, licensing and permitting processes

4. PROJECT OBJECTIVES

As mentioned under the Executive Summary Section, the City engaged the services of Schafer Consulting to conduct a comprehensive assessment of the City's "as-is" environment in order to determine options for maintaining, enhancing or replacing the current systems. The end results were to ensure the project objectives are in alignment with the City's business objectives and be constructed in a Business Case for executive review and decision making.

The project phases include the following:

Phase I

- A thorough assessment of the current state of the City's ERP and ancillary systems, including a detailed gap analysis between the current state of its technology and the anticipated need for the future.
- A Business Case that identifies current constraints, risks, cost analysis, performance indicators, and organizational impact, along with a recommended strategy for the City to move forward
- A high-level phase Project Plan
- Assist with the evaluation and selection of an ERP vendor that best meet the requirements of the City
- Conduct contract negotiations

Phase II

- Upon completion of vendor selection, begin the implementation of the new systems which will include configuration, training, integration, testing and go live.
- Act as the City's "partner" and designate project management agent to carry out all project management activities necessary during the system implementation phase.

The above scope of work was defined to ensure the following project goals are accomplished:

PROJECT GOALS
• Identify and eliminate any duplicative efforts that do not add value to the process
• Position the City for all future growth and system demands
• Provide financial transparency by sharing real time information effectively throughout the entire City
• Streamline business processes and practices
• Enhance responsiveness in the approval/routing process
• Reduce transaction processing time
• Reduce complexity
• Lower future development costs
• Improve internal and external customer service
• Improve decision support
• React more timely to mandates
• Increase future scalability, flexibility and agility
• Enable incremental change at lower costs
• Develop and maintain consistent data definitions
• Provide increased and improved flexible reporting to allow sophisticated data analysis
• Foster an environment and attitude which encourages the use of new tools in a strategic

manner by everyone
• Increase integrity, validity and reliability of system data
• Assure system wide security and protection of confidential information
• Provide new and expanded self-service access for employees, managers, customers and vendors
• Improve internal communication
• Strengthen internal controls through workflows that enforce City policies and regulations
• Reduce or eliminate manual processes
• Reduce or eliminate the need for backup or “shadow” systems;
• Create a process of standardizing relationships with third party vendors
• Complete the full implementation on schedule and at or below project budget;
• Maintain a positive staff morale during the transition
• Realize the value of the new systems throughout the entire organization
• Implement an integrated approach for the capture, maintenance, storage, access, disposition and preservation of electronic records
• Integrate records management functions into City work processes, IT enterprise architecture and information systems

5. KEY PERFORMANCE INDICATORS

Key Performance Indicators (KPI's) represent quantifiable measurements, developed prior to embarking on the project, to reflect the success factors of the City in the attainment of its long term business goals. The KPI's should address, "What is really important to the project stakeholders and what will make their future workload more productive?"

In order to achieve a particular target level of KPI for the City, every functional area has to work in synergy towards it. For this reason, we have defined KPI's for each functional process, which should in turn work towards accomplishing the overall KPIs of the entire City.

Once the ERP project starts, the KPIs should be used as a performance management tool to ensure that every stakeholder in the City is focused towards meeting the target levels of the PKIs.

KEY PROCESSES / SERVICES	PERFORMANCE MEASURE
Integrate Payroll with other functional modules such as Human Resources, Timekeeping, General Ledger, Accounts Payable, etc.	• Reduce duplicate data entry • Reduce the need to make retroactive corrections through increased automation • Provide electronic workflow tools to facilitate requests and approvals • Improved access to payroll information for researching of timekeeping errors • Improved access to payroll information, including leave balances and breakdown of earnings • Improved access to all other HR/Payroll data elements • Improve automation of FLSA calculations • Reduce or eliminate manual spreadsheets • Provide better audit trails • Ability to protect confidential and sensitive information • Provide real time data
Consolidate and automate timekeeping.	• Provide greater flexibility to track time in multiple pay periods • Provide more accurate current and historical data (i.e.: the number of hours worked by the employees) • Improve tracking of paid and unpaid leave time with more granularity • Reduce instances where employees exhaust their accrued leave which could force their balance into negative hours.

KEY PROCESSES / SERVICES	PERFORMANCE MEASURE
	• Increase the accuracy of labor distribution data • Increase employee ownership and accountability • Ensure compliance with policies and attendance for FMLA.
Maintain accurate compensation data	• Ensure accurate calculations • Decrease time to provide hiring salary recommendations to clients • Increase accessibility to pay plan information with easy pay plan maintenance • Ability to predict impact of proposed pay plan changes from compensation studies
Maintain accurate employee training information	• Consolidate and centralize location for all employee training data • Ability to track required training • Easy access to employee records, including the ability to search by individual and training course.
Automate on-line application/hiring process	• Provide flexibility and customizable application tool to serve specific requirements of each department • Ability to communicate minimum requirements and testing dates • Integration between applicant tracking to personnel administration • Reduce or eliminate manual paper trails
Automate performance management	• Eliminate manual calculations/errors • Automate reminder notices of employee review dates • Expedite the approval process using electronic workflow tools
Workforce Planning/Position Control	• Ability to track vacant and filled positions and all required attributes • Ability to forecast impacts of anticipated workforce changes (i.e. impact of re-organizations, double incumbency of a position and succession planning.) • Ability to fund and unfund a position based on need, grant approval, budget constraints, etc. • Improve the approval process for creating a position, including the approval of job titles and pay

KEY PROCESSES / SERVICES	PERFORMANCE MEASURE
	• Provide strong real time reporting of FTEs, vacancies, costs, etc.
Integrate Purchasing/Contracts with AP for automatic tracking of payment history and vendor invoices.	• Reduce or eliminate manual spreadsheets. • Reduce the need to maintain hardcopy documents (copy of contracts, master agreements, change orders, etc.) by scanning and electronically attaching documents to vendor and/or purchase order records. • Reduce the need to reconcile between manual spreadsheets and AP records.
Automate invoice approval processes by eliminating hard copies	• Reduce the need to move hard copy invoices through the approval process by utilizing electronic workflow tools • Improve internal control by configuring the system to either block or warn an unapproved payment • Reduce processing time.
Automate the process of tracking expiration dates on contracts to prevent payments on expired contracts.	• Eliminate manual tracking efforts by allowing the system to automatically warn or block payments on expired contracts • Reduce the number of correcting entries for payments erroneously made against expired contracts.
Consolidate different chart of accounts into one uniform chart across the entire City	• Reduce the amount of reconciliation time. • Timely closing of month-end and year-end activities • Reduce or eliminate the need for duplicate data entry • Eliminate timing differences
Automate the reversal of month end and year end accrual entries	• Reduce the time to re-input the reversal journal entry • Improve data accuracy by having the system auto-reverse the debits and credits • Reduce processing and reviewing time
Maintain detailed budget information based on any user-defined hierarchical level	• Reduce the need to maintain hard copy supporting documents • Reduce the need to track detailed budget information on spreadsheets • Reduce the number of errors by tracking in one centralized system • Eliminate the need to reconcile from spreadsheets to the budget system

KEY PROCESSES / SERVICES	PERFORMANCE MEASURE
	• Facilitate decision making in a timely basis
Automate the budget request process	• Reduce the amount of paper and forms used • Optimize/expedite the approval process • Maintain better approval audit trails • Reduce the time it takes to prepare manual budget requests in Excel or Word
Automate the entire grant administration and grant accounting process	• Eliminate non-value added tasks of re-entering information in multiple "shadow" systems • Reduce the amount of time to run reports and perform online queries, especially reports that cross fiscal years. • Ability to track grant budgets in a centralized database • Decrease the number of processing errors • Empower grant administrators to make decisions based on real time and accurate information • Free up staff time to seek new funding opportunities • Free up staff time to offer additional services • Reduce staff time by automating the grant due dates. Currently due dates are manually tracked by staff.
Automate three-way matching in purchasing/ accounts payable	• Reduce processing time • Improve internal controls. Users can configure the system to either block or warn the processing of the transaction if 3 way matching did not take place.
Create and track budgets at the project, grant, program or activity level	• Reduce the need to track project budgets outside of the system • Ability to run budget to actual reports in an expeditious manner • Facilitate decision making on a timely basis
Improved services to City employees through the use of self service tools	• Reduce the need for the Accounting Services and HR Departments to manually enter benefit enrollment information • Reduce the need for the Accounting Services and HR Departments to make changes to employee data, such as contact information, name of beneficiary, number of payroll exemptions, etc.

KEY PROCESSES / SERVICES	PERFORMANCE MEASURE
	• Reduce or eliminate the need to fill out paper forms that can be entered directly by the employees with proper security • Eliminate the need to distribute monthly reports to City departments. Authorized users should have the ability to run their own reports efficiently and timely
More intuitive and user-friendly system	• Better accommodate increases in number of users, and simplify training for new users • Encourage users to explore additional functionalities within the new system • Reduce processing time and redirect employees' time toward more value added tasks
Improved system security	• Simplify and standardize security procedures across all City financial systems, and further refine our ability to limit security access by function and organizational units • Provide financial transparency without compromising internal controls
Identify common business processes, functions, and data for sharing opportunities and streamlined data management	• Reduce costs and increase efficiency of paper-based processes, especially the imaging and workflow components • Transition from paper based document processes to electronic processing • Support and enhance sharing of data • Streamline and integrate processes that cross business units, multiple applications and department boundaries • Provide foundation components for a consolidated city-wide knowledge base

6. ORGANIZATIONAL IMPACT

A project of this magnitude and complexity will undoubtedly introduce a number of changes to the City and have a significant impact on its infrastructure, people, culture and organization. Often, the focus of implementation is on the technical side of the project, and too little attention is focused on the organizational change needed to complete the project successfully The following table provides an outline of the issues that the City's Project Management Team will have to proactively anticipate and be ready to manage once the implementation phase begins. The self assessed ratings were assigned by City personnel using the following rating system:

H = impact level is high
M = impact level is average
L = impact level is low

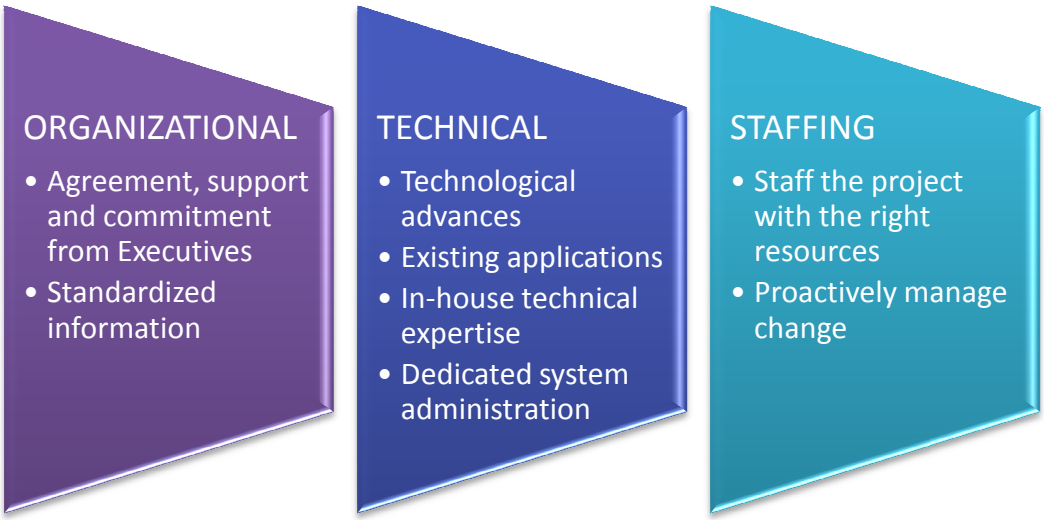
ORGANIZATIONAL IMPACT	IMPACT RATING (1-5)
Infrastructure/Technology	**M**
➢ Infrastructure impact: o Security considerations as more users may be accessing the system from outside of the City's firewall o More users will be added to the system due to the possibility of using additional functionalities, such as employee self service, on-line recruiting, on-line approval, on-line pay stub distribution, report distributions, integration with Microsoft Exchange server, SharePoint server, mobile access via cell phone or PDA, etc o Performance tuning – this will involve multiple teams, i.e. Programming, Network Support, Database Administration, and System Engineering. o In addition to the servers required to support the core components of the ERP system (Web server, Database Server, Application Server(s), etc.), the following servers may be needed: ▪ Middleware server for interfaces and integration ▪ Additional servers for remote access ▪ Additional servers for on-line analytical processing and decision support ➢ Technology impact o IT skills: ▪ Shifting from maintaining aging systems and developing customized reports to the creation of workflows and configuration of functionalities. The role and skill sets of existing IT staff may need to be changed or upgraded ▪ More users will be able to create their own reports from a centralized database. This will result in less reliance on the IT Department. ▪ The process of adding users may become more efficient as they will be created from an Active Directory Server. However, the complexity of the security model increases. ➢ IT staff morale o Transition plans are needed to move the existing IT staff from supporting older technology to newer technology which could result in paying senior level staff to perform junior level work or	

vice versa. Also, transition plans will be difficult to execute during project implementation, as the existing IT staff need to continue to support legacy systems and keep the business running. o IT staff supporting the current systems may worry about job security. It is important for management to clearly communicate that the change in technology does not mean a reduction in IT staff. Rather, it means they will be performing different functions. ➢ Heavy workload during implementation may result in employee fatigue	
Personnel	**H**
➢ A new ERP solution will enable the City to focus on processes that support City-wide business objectives rather than focus on departmental or divisional objectives. ➢ Process ownership and data ownership may become new roles that allow City employees to take responsibility for cross-functional, integrated processes that result in better data quality and which require coordination, communication, and cooperation across several functional areas. ➢ The opportunity to suggest change supports the continuing process improvement, but it does not create a force of change that may be in conflict with past practices of organizational culture of static processes. ➢ The reminders and tracking efficiencies tools provided by a new ERP system will create a better atmosphere of responsiveness and customer-focused prioritization.	
Organizational Culture	**H**
➢ To achieve best practices, the City's operations may shift from being more centralized to decentralization or vice versa potentially creating a political impact. ➢ The City may experience higher than usual attrition rate during and post implementation. ➢ Users will need to adjust to using WUI (Web User Interface) vs. TUI (Text User Interface). ➢ City employees will have to concurrently adjust to not only a new system, but also new business processes. The changes to workflow, level of authorization and data management need to be addressed within a comprehensive change management and training program. ➢ Through the use of dashboard technology, more City Executives will be able to play a more active 'hands-on' role for making decisions, without relying on their staff to run reports and perform inquiries. ➢ The new technology may facilitate the ability for employees to telecommute from home due to severe weather and other natural conditions.	
Business Process	**H**
➢ The 'to be' business processes can be very different from the current state due to: o Process re-engineering as a result of the new ERP system o Adoption of new processes for new functionalities and tools, such as workflow, self-service, reporting, imaging, etc. ➢ Business process re-engineering and technology advancement promote a	

function rich environment, but it might initially cause a learning gap, therefore, a reduction of productivity. ➢ Roles and responsibilities may change as a result of the business process re-engineering. ➢ New policies and procedures will need to be created and communicated to manage new business processes.	
Organizational Structure	**H**
➢ The organizational structure may change to align responsibilities with the new system. This is especially true for the IT Departments as the fundamental underlining technology will be changed. ➢ The integrated nature of a COTS solution will affect the City by altering the workflow and encouraging City employees to view their contribution as part of the overall City process rather than viewing themselves as the owners and gatekeepers of the data they create.	
Facilities	**H**
➢ Training facilities with network connections and workstations will be required for classroom training, project meetings, conference room pilot, and system testing during project implementation as well as on-going and new staff training post project implementation. ➢ Extra work space for external consultants will be needed.	

7. DEPENDENCIES

There are numerous dependency factors that will play a role in the success of the City's ERP System Project. Time spent ensuring that these factors are addressed correctly at the beginning of the project will ensure the City spends less time correcting problems later on. If the dependency factors are not identified upfront in order to ensure alignment with the City's business objectives, then the project success could be jeopardized. Strategies for addressing these dependencies can be classified into three different groups: organizational, technical and staffing.



Organizational Strategy

- **Agreement, Support and Commitment from Executives**

  Within several City Departments, separate financial, human resources, payroll and other functions exist, including the School Department. Each department within the City has its own diverse needs and, due to the system's inability to meet these needs, they have had to develop workaround processes. As a result, the decentralization has led to separate policies and procedures, business processes and in some instances, different uses of the chart of accounts.

  Despite the fact that City Departments have different requirements and needs, it will be critical that all City and School executives support the project. There should be a City-wide understanding of the project's purpose and a buy-in from all Departmental Managers and major stakeholders, which should stem from a universal message from City Executives. All parties should have the opportunity to air their views and openly communicate their concerns. But in the end, it will be important that the executives agree and declare their support for the project.

- **Standardized Information**

  The City should create a knowledge sharing environment that helps the employees "know what they need to know" to perform their job. The primary focus should be the

enhancement of City communications and in building uniform workflows into the system in order to increase employees' comfort and understanding of the new systems, facilitate early adaptation, and improve productivity.

Based on the results of our needs assessment workshops, the City should consider standardizing the following:

- Policies & Procedures – The City should revisit its existing policies and procedures as they may be outdated and in need of revisions; however, employees should not assume their current processes would be revised simply due to the introduction of new technology. In revising and standardizing policies and procedures, it is important for the City to optimize its processes and let the re-engineered processes drive system design. Once new policies and procedures have been developed, it is important that they are properly communicated to everyone who is impacted by the change. One way to communicate the change is through the use of the project SharePoint; however multiple communication methods should be used to ensure complete distribution of information.
- Forms – Within the City, many forms are not standardized. Project SharePoint can be used to standardize these forms and make them available in electronic format in order to enforce form consistency throughout the City.
- Manuals – User reference materials are not always accessible, especially those associated with customized applications. If the City uses SharePoint to disseminate end user guides and technical documentation, it would allow users an easy-to-access "library" of research information. When users need guidance on system related issues, they can search on-line for the information or contact the help desk (see next item) for direction on which manual/guide is most applicable.
- Help Desk – End users will need a centralized place to call for assistance and guidance for this type of project. In conjunction with this project, the City's Help Desk should establish a standardized set of procedures that provide a single point of contact to direct questions and report problems regarding supported software and hardware. The goal of the Help Desk should be to resolve issues and help users maximize their use of applications or equipment, or distribute the call to the appropriate staff.
- Training – A sound training plan will be critical to the success of the project, both during implementation and on an on-going basis.

Standardization of policies and procedures will allow the City to properly configure the new system(s) and to build business rules into the electronic workflow tools. The end result will be greater consistency and efficiency throughout the entire organization.

Technical Strategy

- **Technological Advances**

The City's future success will depend on its ability to stay abreast of technological advances, such as the latest releases from software vendors and to respond quickly to evolving trends and end users' needs. Investing in new technology will necessitate continuing education for City employees.

- **Existing Applications**

  While the City's core ERP System will be the foundation of management of its operations, the City will continue to use other ancillary software applications such as those used to track Welfare, Property Tax Credits and Abatement, Parking Tickets, New Hampshire Retirement, Deferred Compensation, Solid Waste, Risk Management, GIS, etc. to meet the unique needs of and provide additional functionalities to certain users. The successful interface of data to and from these ancillary systems, combined with available and accessible technical assistance from the software vendors, is critical to the success of the project.

  NOTE: The applications illustrated have been migrated or upgraded previously from ADMINS (excluding legacy ADMINS programs) and are not being replaced by the Systems Modernization Project. These applications will be integrated into one or more components of the new project infrastructure. Legacy ADMINS applications will be migrated in the latter half of the project to new or existing off-the-shelf or free applications.

- **In-house Technical Expertise**

  The appropriate technical expertise will be necessary for the success of the project. If the City moves forward with our recommendation to implement Option 4, it will be necessary to assign and/or transition sufficient technical resources to meet the constant demands of the project.

- **Dedicated Database Administrator (DBA) and ERP Support Specialist**

  The City will need a dedicated DBA to support the environmental aspects of the ERP database(s). These aspects include database configuration, security administration, analysis, data modeling and optimization. Additionally, an ERP Support Specialist with a hybrid of accounting and financial systems knowledge is needed to assist users with the ongoing ERP related tasks of creating/modifying workflows, reporting, managing users and security, and resolving other help desk calls specific to the ERP.

Staffing Strategy

- **Staff the Project with the Right Resources**

  Implementation projects are typically staffed with application specialists who are very familiar with the current application functionalities. They will be tasked to develop specifications, code reports, load tables, train users, and perform system testing. Their primary responsibilities generally include providing assistance with application analysis, design and development.

  In order for the City to meet the ever-broadening demand for cost containment, increasing efficiency, and to successfully undertake the challenge of business transformation, the project should also include Business Process Resources (i.e. Subject Matter Experts). They are the City's internal and external experts in the assessment, analysis, and redesign

of business processes who are experienced in the areas of strategic process design and business change. The inclusion of Business Process Resources to complement the application specialists will ensure the City of achieving the gains of the new systems. Alternatively, the exclusion of the internal Business Process Resources will result in the under-utilization of capabilities of the new systems due to migration of inefficient business processes from the legacy systems to the new environment. Most of the internal Business Process Resources who participated in the needs assessment workshops should continue to stay involved with the execution of the Business Case recommendation.

- **Proactively Manage Change**

Throughout the City, departments have different needs that the legacy systems have not been able to meet. This has led to a lack of consistent processes among the different departments and how they manage their financial information. As a result, most users rely on spreadsheets and other "shadow" systems to provide their needed functionality. Users of those systems may be reluctant to adapt to new systems since they already have a proven way to meet their needs. In addition, many users may be worried about job security, their position, authority, and the effect of the new systems on their everyday work. In order to manage employee concerns about the new systems, City executives must analyze these concerns and employ the appropriate set of strategies to ensure that the overall goals of the financial system project are not compromised solely to maintain current practices and processes.

Change management requires strategic efforts to increase users' adoption of the new systems and minimize resistance and lost productivity. A major strategy for reducing anxiety among potential users of any new system is to provide continuous information to the users. Everyone must understand where the City is today, why the City needs change, and where the City needs to be.

An additional strategy to improve acceptance is to emphasize user involvement. The City should use cross functional teams to establish inter-departmental collaboration and to drive business processes. Each team member will feel that their input and suggestions have been considered before decisions are made.

In summary, it is important that the City expect and plan for change management and develop strategies before the implementation process begins. Early planning will facilitate the identification of potential problem areas and help to transform resistance into understanding and support for change.

8. RISKS

The types of risks we refer to in this section deal specifically with risks associated with the acquisition and implementation of a new ERP system. These risks are not to be confused with the greater risks of NOT addressing the current system obsolescence crisis.

Risk is inherent with any project, therefore, it is important for the City's Project Management Team to recognize the potential risks associated with this project and start laying the groundwork for a risk management plan. If the City does not have such a plan in place at the start of the project to address adverse events, even small events can become problematic and have a domino effect on remaining project tasks.

Working in conjunction with the City, we have collectively identified some common risks associated with the decision to purchase and implement a new ERP system, which can stem from any number of factors, including the environment, user expectations, competing projects, project assumptions, resources, etc. The following table presents a list of risks by category. The rating for each risk category represents the average value of the self assessment performed by City employees and the common results of similar projects executed by Schafer Consulting. The ratings are intended to be a relative measure of risk at this point in time and should be re-evaluated as more information becomes available. The risk rating system uses a scale of 1 to 5 and is explained below:

- "5" indicates a very high risk – this risk is very likely to occur and will have a large impact. It is more difficult to mitigate this type of risk.
- "4" indicates a medium to high risk – this risk may be likely to occur with a significant impact
- "3" indicates a medium risk – this risk is likely to occur and will have an average impact on project scope, schedule, cost, or quality.
- "2" indicates a low-medium risk – this risk may not be very likely but if it did occur, it would have a fairly significant impact.
- "1" indicates a very low risk – this risk is not likely to occur and if it did, the impact would be minimal

RISK CATEGORY AND COMMENTS	**Risk Rating** (1 to 5)
Customer Risk	**4.5**

• Change Management Strategy/Plan not in place to ensure a smooth transition from the "as is" to the "to be" business operating environment
  ○ Customers' (i.e. users of the ERP system) inability to operate the new system in order to conduct day-to-day business activities
  ○ Expectation gaps
• Inaccurate data (Financial, Payroll, HR, etc) due to implementation and data conversion errors
• Lack of internal customer buy-in and resistance to change	

Contract Risk	**1.5**
• Contract negotiations between the City and the software vendor could cause project delays	

• The City must provide sufficient information and clearly state the scope of work in the ERP System RFP; otherwise, contract change orders could significantly increase the cost of the project. • Software and Integration Services contracts not adequately negotiated to offer enough remedy and protection for the City. • Common contracting practices relating to change orders and project creep create difficulty in contracting for a firm amount.	
Project Schedule Risk	**3.5**

• Unrealistic timeline
• Scope of the project is not completely defined
  o Required work is missing
  o Scope creep
  o Confusion among project team members
  o Project delays
• Scope of the project is not properly managed
• Decision making is not timely enough in the context of project timeline
• The actual effort required may be higher/lower than initially estimated
• Business requirements are not properly defined
• Project resources (vendor and key City staff) are not available as planned
  o Vendor juggles resources for other projects/clients
  o Vendor and key City staff might become unavailable due to attrition, reassignments and unplanned leaves
  o Vendor and/or City assign unqualified resources for the job
  o Key City staff need to perform their regular duties in addition to project implementation
  o Resource and staff augmentation strategy/plan not in place
• Training strategy/plan is not in place or not effective for the business users.
• Technical environments not setup in time. Some of the factors that might cause delays include:
  o Prolonged contract negotiation with hardware vendors
  o Delay in finalizing hardware solution
  o Hardware vendor's response time and availability of stock on hand
• Functional and system tests strategy/plan are not adequate
• The data quality on the source systems is of a poor quality requiring multiple rounds of data migration test runs; thereby leading to a delay in data migration.	

Project Duration Risk	**3.5**

• If duration is too long, it could:
  o Drive up the cost of the project.
  o Cause team members to lose project momentum and focus.
  o Compete with other City initiatives and resources.
  o Change key project members due to attrition, transfers, or leaves.
  o Impact morale of key project members due to heavy workload for the extended period of time.
  o Increase risk of project being discontinued.	

○ Encounter major software product patches and upgrades, which results in increased workload. • If duration is too short: ○ Users do not have sufficient time to perform all the necessary system tests. ○ Fatigue of key project members. ○ Users are not adequately trained to perform their work. ○ Loss of productivity. ○ Users do not fully utilize all the functionalities of the new system. ○ Fail to identify and configure all system requirements ○ Poor documentation of project decisions	
Project Complexity Risk	**2.5**
• Team Spirit – The implementation of a new ERP system, in terms of the number of City employees it will affect, could be one of the biggest projects the City has ever experienced. Maintaining enthusiasm and commitment to quality could present a challenge over time and require strong project management to achieve deliverables and demonstrate progress.	
Project Management Risk	**3**
• The interest and priority of each City department may be different. • Lack of centralized chain of commands • Forming teams that represent the functional areas across the entire City • Executive Sponsors not fully committed to support the program • Communication strategy/plan is not in place to manage expectations and change • Communication is not effective in managing expectations and gaining buy-in from users and customers	
Procurement Risk	**2.5**
• Large gap between the delivery expectations and actual delivery.	
Cost Sensitivity Risk	**2**
• Project contingencies typically account for 10 to 20 percent of implementation services costs. • Gap analysis between the City's requirements and the capabilities of the new system not conducted thoroughly, causing delays and additional costs. • Scope of the project not clearly identified in the RFP and in the contract, causing change orders and delays. • The Disaster & Recovery and possible network infrastructure upgrade strategies/plans for the new project are not in place.	
Cultural / Organizational Risk	**3.5**
• Financial system implementation may introduce the following cultural/organizational changes: ○ Redesign and/or combining of multiple charts of accounts. ○ Adding "self service" functionalities to automate paper-based	

processes. o Re-organization due to business process re-engineering. o Business processes change to leverage the full functionality of the new system. o Shifting of City operations from a centralized to a more decentralized environment or vice versa. • Employee Morale o City may experience higher than usual turnover during implementation. o Transition plans for existing IT staff not in place. o Employee's perception of job security. o Additional work load may result in employee fatigue o Loss of institutional knowledge due to attrition.	
Security Risk	**2**
• Web enabled technologies present security risks because they provide users the ability to utilize the system outside of the City's firewall. The users may include, but are not limit to, citizens, employees, financial institutions, vendors, and suppliers. • An integrated ERP system could potentially increase the complexity of the security model.	
Technical Risk	**2.5**
• IT staff's readiness for implementation and support due to new technologies o Other projects competing for resources o Experience higher than usual production support activities during implementation o Hiring and transitioning staff to support new technologies • Users' adaptability to the new platform and solution. For example, there is a high probability, if the City does acquire a new ERP system, that a browser-based environment would be implemented. Certain high-volume users of the current system may find that particular tasks are less efficient in a browser-based system than in a mainframe environment. The users may complain that data entry is slower in a new system. This is due to the nature of the technology, which inherently trades-off keystroke efficiency for improved data retrieval, management and analysis.	
Total risk scores / number of risks identified	**31/11**
AVERAGE RISK RATING (1 to 5):	**2.8**

As mentioned above, the City should develop a risk management plan to document, analyze and mitigate each risk occurrence. Furthermore, as new information becomes available and/or as changes occur that may impact the project, the City should re-evaluate existing risks and re-assess the corresponding mitigation plans.

Information that should be tracked and documented with each risk includes:

- Event – What could happen if event occurred?
- Probability – How likely is it to happen?
- Impact – How bad will it be if the event occurred?
- Mitigation – How can the City reduce the probability (and by how much)?
- Contingency – How can the City reduce the impact (and by how much)?
- Transfer the Risk – Outsource risk to a third party who can manage the outcome

The common risks that we have preliminarily identified above can be managed by adopting the following mitigating measures:

- Develop a project work plan
- Ensure project transparency by developing a sound communication plan
- Develop comprehensive RFP's and negotiate with vendors on key terms and conditions
- Identify resources and develop staff augmentation plans if necessary. If resources are constrained, consider a "Phased-in" versus a "Big Bang" implementation approach
- Develop a change management plan
- Manage the project budget by conducting frequent reviews of project status and milestones;
- Develop a training plan for both the functional and technical staff;
- Establish project contingency funds for possible overruns and change orders
- Hire a third party to provide project oversight, quality assurance, verification and validation
- Hire an outside attorney, if necessary, to assist with software license and implementation contracts

9. ADDITIONAL ASSUMPTIONS

In addition to the costs and risks associated with the new ERP system, certain assumptions have been made in association with the project. In general, these include:

- The City will have full support from its Executive Project Sponsors.
- The City will commit the necessary resources to the project to ensure success.
- Provisions will be made to provide staff augmentation during the project.
- The project will be considered a City-wide priority.
- Utilizing a "Phased in" approach, whereby the project will begin with implementing core financial modules followed by human resources/payroll, utility billing, licensing & permitting and electronic content management. There should be at least a three months overlap between these phases.
- The City will establish Change Management, Communication and Risk Mitigation Plans.
- The City will assign a dedicated Project Management Team.
- Our analysis does not include any restatement of numbers in present value formats, nor does it include projections for increases, either in personnel costs or in operational costs, during the period analyzed. Even though such increases will most likely occur, the impact on projected numbers is not considered material enough to distort our recommendations or conclusions.

10. COST / BENEFIT ANALYSIS

The nature and complexity of government organizations makes assessing their return on technology investments a challenging task, as traditional Return on Investment (ROI) tools do not capture the complete picture. The returns may be large or small; from saving a few minutes on a routine transaction to improving the financial transparency of an entire organization.

Rather than taking an ROI approach, we have developed a cost / benefit analysis that includes Capital Investment Cost calculations, a funding flow analysis and benefits to be derived from the investment.

COSTS

The first step of our Cost / Benefit Analysis is to determine the Capital Investment Cost of replacing the City's existing ERP system. These costs are illustrated below:

Factors that could impact the Capital Investment include:

Acquisition:

- Number of subsystems to review and purchase
- Size of the City's evaluation committee
- Number of City personnel participating in the software demos
- Number of "short-listed" vendors (finalists on the list of potential vendors)
- Length of onsite software demonstration
- Length and complexity of contract negotiation

Hardware:

- Number of environments (development, training, testing, and production), as well as configuration for each environment (number of users, sizing, sharing servers, etc).
- Number of current users and batch jobs
- Selected software solution, as each vendor will have different sizing and server requirements
- Hardware preference
- Configuration preference, such as server redundancy, storage method (SAN, NAS, Local Drive, etc), backup equipment, Disaster and Recovery requirements, capacity utilization tolerance for servers, etc.
- Ability of the City to leverage its existing hardware and infrastructure

Software:

- Number of subsystems/modules
- Number of concurrent users
- Number of named users
- Operating budget
- Number of servers
- Number of sites/organizations
- Other pricing methodologies

Implementation Consulting Fees:

- Number of subsystems/modules to implement
- Number of City FTEs allocated to the project (including the amount of project work the City is willing to manage internally)
- Amount of historical data to convert
- Number of data interfaces
- Amount of customization
- Length of project
- Length of post implementation support

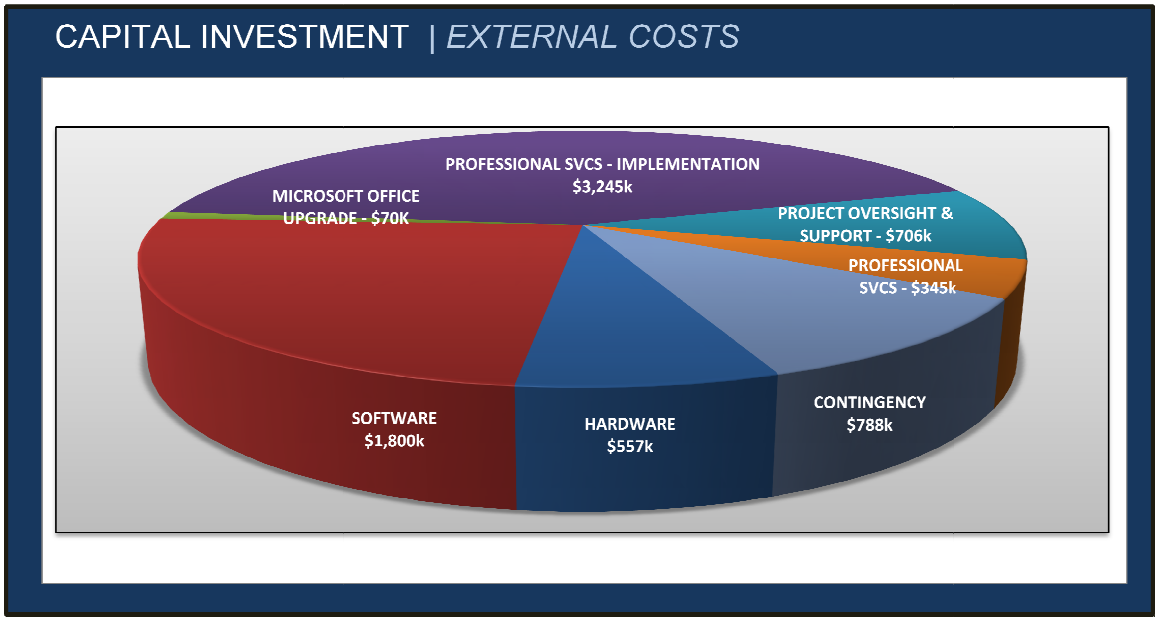
On-going Support Costs:

- Frequency of version upgrades and bug fixes
- Annual escalation percentage of maintenance fees
- Level of maintenance support
- In house system administration efforts versus hosted solutions.

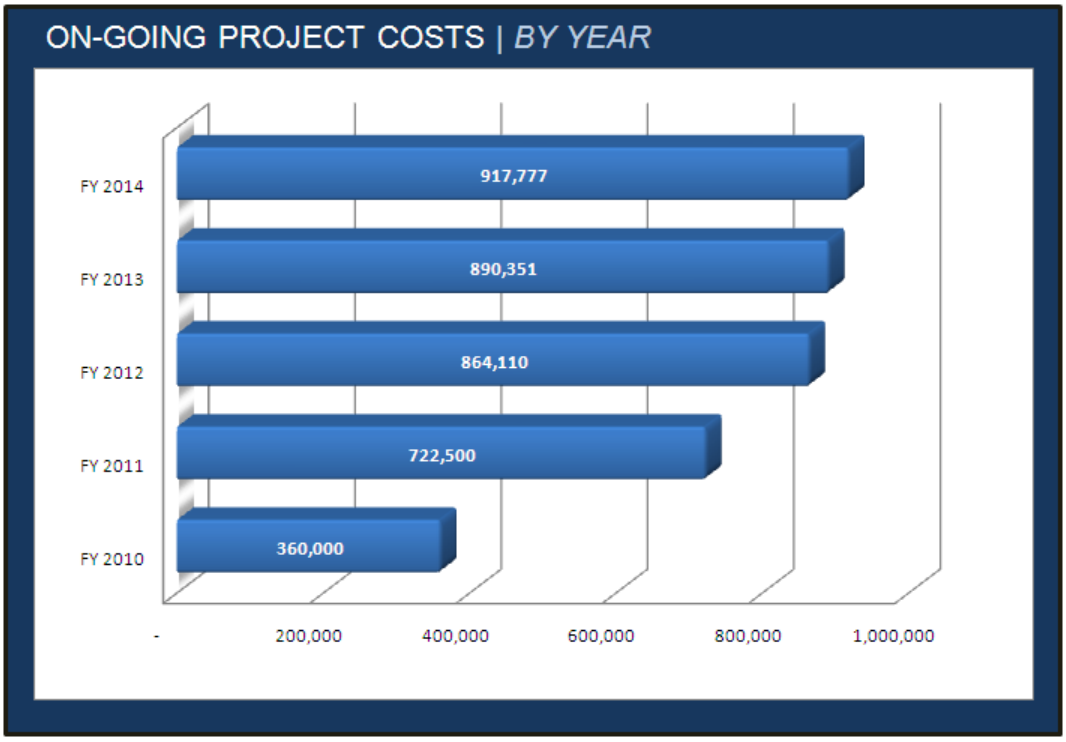
The purpose of presenting the “Capital Investment by Category” chart and its associated pie graph below is to illustrate how costs are typically allocated to the various cost components of a large software project

CAPITAL INVESTMENT BY CATEGORY – OPTION 4 (REPLACEMENT OF CURRENT ERP SYSTEM)

Taking the above factors into consideration, we have developed the Capital Investment for the City based on our best estimate from past projects, input from City personnel and high level cost discussions with several vendors from different tier groups. Although the exact costs of the project cannot be determined until the City goes through a formal Request for Proposal (RFP) process, the following cost estimate will provide the City with preliminary information for budgeting and funding purposes and will also shed some light on how project costs are allocated amongst different categories.



As indicated by the pie chart, professional implementation services make up a major component of the project. The next highest cost category represents software costs of $1.8 million. In addition to planning for the initial capital investment of $7.5 million, the City will also need to appropriate funds annually for ongoing maintenance and user support of the new systems for as long as the systems are in place. The estimated ongoing costs for the next five years are presented in the bar graph below.



Below we present three tables; the first one illustrates the cost of the total one time investment by category; the second one illustrates the ongoing support cost by fiscal year; and the third table shows external cost by subcomponents of the project (i.e.: ERP, ECM and Licensing & Permitting).

COST CATEGORY	Estimated Cost
External Costs	
Hardware	$ 557,285.00
Software	$ 1,800,000.00
Microsoft Office upgrade (from Microsoft Office 2003 to 2007)	$ 70,000.00
Professional Services - Implementation (including training, configuration, data conversion, testing, project management, etc.)	$ 3,245,000.00
Independent Project Oversight and Application Support	$ 705,600.00
Professional Services - Other (assistance with data conversion, data cleaning, etc.)	$ 345,000.00
Subtotal	**$ 6,722,885.00**
10% Project Contingency	$ 787,788.50
Total External Costs - Bondable	**$ 7,510,673.50**

ONGOING COSTS	FY 2010	FY 2011	FY2012	FY2013	FY2014
Internal IT Support	$ -	$ 207,000.00	$ 213,210.00	$ 219,606.30	$ 226,194.49
Annual Maintenance (based on industry standard of 20% of software license fee)	$ 360,000.00	$ 378,000.00	$ 396,900.00	$ 416,745.00	$ 437,582.25
Anticipated ERP vendor services for configurations, testing of software upgrades and customization (based on 10% of the original implementation fee. Only 50% is anticipated to be incurred in FY2011)	$ -	$ 137,500.00	$ 275,000.00	$ 275,000.00	$ 275,000.00
Less: Savings from annual maintenance of current systems	$ -	$ -	$ (21,000.00)	$ (21,000.00)	$ (21,000.00)
Total Ongoing Cost by Year	**$ 360,000.00**	**$ 722,500.00**	**$ 864,110.00**	**$ 890,351.30**	**$ 917,776.74**

COST BY SUBCOMPONENT	External Cost
ERP	$ 5,570,273.50
Licensing & Permitting	$ 1,268,437.50
ECMS	$ 671,962.50
Total External Costs - Bondable	**$ 7,510,673.50**

BENEFITS

Financial Benefits

- Increased productivity
- Reduced paper transactions
- Reduction in the need to add staff in the future due a reduction in the number of interfaces to maintain, less effort to develop customized applications, simpler operations and infrastructure, and use of vendor technology
- Fewer processing errors
- Elimination or reduction of manual processes

Currently, there is a significant amount of time devoted to performing manual processes. With new technology, more efficient allocation of resources could be achieved. However, it is important to bear in mind the gain from reallocation of resources may not occur in the first few years, as City employees will need to undergo a gradual learning curve, adapt to changes, and adjust to new business processes that have been put in place. Studies have shown that during these initial years, the City's productivity may actually go down before it goes back up. Once knowledge transfer of the new system and processes is complete, the City will begin to reap the benefit of its capital investment. At this stage, the City may be able to reduce its workforce through attrition.

Short of performing a time and motion study, personnel costs associated with manual processes are difficult to quantify. Even if estimates were obtained from City employees who routinely perform these processes, the savings from reducing or eliminating these processes could still be quite subjective. Instead of quantitatively measuring the impact of these manual processes, we will present a detailed description of each process by functional area in order to demonstrate inefficiencies in how employees are spending their time. Most of these processes are performed because:

- The system does not have the capacity to track required data; therefore, separate schedules and worksheets need to be maintained to track this data.
- The system cannot perform the necessary calculations and/or allocations, which must be performed in Excel.
- The system lacks automated approval functionality, and therefore necessitates the manual forwarding of paper documents for review and approval.
- The system lacks a scheduling engine to enable notifications to automatically be sent out to users based on a system date or user defined rule. As a result, users need to keep track of due dates, expiration dates, overdue accounts, upcoming training, etc. manually. Employees cannot obtain useful reports out of the system without support from the IT Department
- The system does not have the capacity to attach electronic documents to system records, which has lead to a continued reliance on paper forms and paper intensive business processes
- There is a lack of real time integration; therefore employees have to perform duplicate data entry and data must be reconciled due to timing differences and other discrepancies
- Lack of system controls has lead to the need to manually review entries for accuracy. This includes the manual control of items such as control totals, balanced entries, duplicate primary identifiers, and budget availability.,

General Ledger Manual Processes
• Manually controlling the balancing of debits and credits within funds on journal entries. • Reconciliation of due to/due from accounts. (The system allows the funds to be out of balance, and the only way to uncover an out of balance condition is through year end review of the Trial Balance). . • Manual allocation of teacher's salaries who elect to be paid throughout the summer months. • Calculation of interest allocations in Excel. • Time spent creating entries that recur on a regular basis (the system does not have the ability to facilitate the process of automatically creating recurring journal entries.) • Time spent on correcting entries after the posting process has been completed (another journal is created to reverse the entry, rather than being able to reverse the original entry) • Manual calculation of new fiscal year balances up until the balance forward entry is posted. • Manual budget checking. • Duplicate data entry efforts to enter journal entries onto spreadsheets and then

into ADMINS.

- Additional work is created due to the fact that the system does not prevent duplicate journal entry numbers and also does not prevent users from making changes to a journal entry that has already been posted.
- Additional work is created due to the fact that journal entries are used to make corrections, even if the originating transactions occurred in a subsidiary ledger. This causes the subsidiary ledger to be out of balance from the General Ledger and distorts historical data.
- Additional work is created due to the fact that there is no referential integrity in the General Ledger as the system does not validate whether users are posting entries to valid account numbers. Invalid accounts show up on an exception report the following day versus being validated at the time of entry. .
- Time spent to manually create journal entries to post summary information from subsidiary ledgers to the GL (with the exception of Payables, Treasury Receipts and Payroll).
- Manual routing of approval of journal entries.
- Time spent creating, sorting, formatting, and calculating reports through Excel in order to prepare the CAFR, Single Audit Report, Annual Budget Report, etc.
- Manual bank reconciliation, including the manual matching of bank transactions to General Ledger transactions. (An automated bank reconciliation module would simplify the bank reconciliation process, detect unrecorded transactions between the bank and book, locate errors and differences, allow for the recording of corrections, etc.)
- Additional work caused by the limitations in the current chart of accounts structure.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to journal entry backup documents).

Projects Manual Processes

- Statistical and other performance measurement information is tracked offline, using either Microsoft Word or Excel.
- Use of Excel to prepare many project/program reports due to the fact that the current chart of accounts structure does not provide a hierarchical account code structure that allows for projects/programs to be summarized/rolled up in order to meet reporting needs.
- Management of project budgets in Excel or other applications.
- Project/program information such as timelines and deliverables, and invoice payments against contracts are tracked outside of the system.
- Preparation of quarterly reports to funding agencies in Word or Excel (they cannot be produced directly from the system.)
- Preparation of the School's Project Status Report for each federally funded project.
- Time spent tracking milestones and key dates due to the fact that the system does not have an automated "ticker" system.
- Time spent in compiling required information due to lack of query/reporting capabilities.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Accounts Payable Manual Processes

- Three-way matching (including time spent on resolution and documentation of discrepancies).
- Process of converting workers comp information (from RiskMaster) into vouchers in order to be processed by AP.
- Tracking of invoice and payment related details in Excel by City Hall.
- Tracking of utilities in Excel by City Hall.
- Tracking of advertising costs in Excel by City Hall.
- Tracking of the receipt of W-9's for landlord payments in Excel by City Hall.
- Tracking of cell phone and air card usage in Excel.
- Tracking of cell phone payments to vendor by department, cell phone number, user name, etc. in order to reconcile payments against invoices.
- Tracking of educational reimbursement detail and other detailed expense information in Excel by the Fire Marshall's Office.
- Tracking of photocopy utilization and lease payments in Excel by the School.
- Tracking of purchase orders, budgets, invoices, etc. in Excel by the School.
- Allocation of phone bills in Excel by the School.
- Tracking of First Student invoices and payments in Excel by the School.
- Tracking of clothing allowances, tuition reimbursement, books and subscription payments in Excel by the Police Department.
- Tracking of travel reimbursements in Excel by Parks and Recreation.
- Tracking of game officials in Excel by Parks and Recreation.
- Routing of invoices for review and approval within City Hall and Schools
- Manual budget checking for invoices at City Hall
- Manual tracking to ensure that invoices are not paid for an amount greater than the original purchase order.
- Creation and maintenance of multiple vendor ID's in order to accommodate vendors with both 1099 and non-1099 payments.
- Creation and maintenance of separate vendor ID's for internal checks.
- Cleanup at year end to ensure proper 1099 reporting.
- Manual reconciliation of invoice totals to all of the line items in ADMINS (lack of control total for each invoice in ADMINS).
- Re-entry of payment details, such as the warrant number, vendor number, date, etc., for each line item on an invoice (redundant data entry).
- Manual tracking of aging of invoices by certain departments.
- Manual routing of invoices and warrant listings for approval.
- Manual processing of ACH payments through the Treasurer's Office. (The wire is not automatically sent by the system when checks are processed).
- Time spent reconciling open purchase orders (encumbrance balances) to the General Ledger.
- Manual tracking and application of credit memos.

- Time spent on reconciling discrepancies due to the fact that payment information/invoices can be altered after a payment has already been generated.
- Tedious process to accrue invoices at year end.
- Time spent on sorting, formatting, and calculating reports through Crystal Reports and Excel.
- Tracking travel advances and travel expense reports (lack of time and expense functionality).
- Time spent on updating vendor addresses, answering vendor questions related to invoice payment, etc. due to a lack of vendor self-service functionality.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Accounts Receivable/Cash Receipts Manual Processes

- Capturing year end accruals for revenues, including grant and other significant sources.
- Preparation of miscellaneous billings in Word or Excel (not automated through the system).
- Manual process of billing out task force work, including the forwarding of a monthly report to Financial Reporting and the reconciliation with labor details and the manual creation of bills (The AR is not automatically created from the Payroll/Timecard data).
- Creation of multiple customer records for the same customer who uses several of the City's services.
- Lack of ability to apply a customer payment to more than one receivable at the same time (if each receivable relates to a different type of service).
- Time spent reconciling 50+ AR accounts to the GL because there is no centralized AR system that automatically posts to the GL (and maintains the integrity of data between the systems).
- Time spent on sorting, formatting, and calculating reports through Excel.
- Internal service billings are performed using journal entries instead of billed through the AR system.
- Processing of customer refunds (AP invoice cannot be automatically created for an AR refund).
- Tracking of prepayments/overpayments to be applied to future customer invoices.
- Manual tracking of follow-up dates with customers.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Budgeting Manual Processes

- Time spent to track budget justifications in Excel and to reference back to them since the information is not visible within ADMINS.
- In order to query capital projects data, users need to exit out of the budget menu and go to a reports menu to pull current or past year's activity.
- Maintenance of spreadsheets to track the budget at a detailed level. This workbook is comprised of several sheets that maintain the budget at different levels of detail and summary.

- Allocation of shared expenses outside of ADMINS.
- Maintenance of spreadsheet used to track detailed information associated with travel because the budget screens do not allow for ample detail and justifications.
- Manual approval process for budget transfers at City Hall.
- Manual routing of department proposed budgets for approval.
- Maintenance of backup sheets to support budget requests that relate to line items with significant changes including commodities budgets that are above a certain threshold. (Public Works)
- Time spent to prepare the final budget report in Crystal Report Writer and to prepare much of the supplementary information in Word or Excel.
- Tracking of budget adjustments outside of ADMINS
- Manual checking to ensure purchase orders do not exceed the budget at the Schools.
- Completion of a manual form by departments to disclose the status of capital projects (requires duplicate date entry on the form and into the system).
- Maintenance of grant budgets outside of the central budget document.
- Time spent to amend the adopted budget each time a budget transfer is made.
- Inability to interface position control data to the budgeting module (manual extraction of position control data for departments' budget preparation).
- Manual rollover of approved encumbrances from prior year.
- Budget modeling and "what-if" scenarios performed in Excel.
- Research of supporting documents for budget transfers, budget requests, etc. (Lack of ability to view supporting documents electronically by drilling down).
- Time spent on sorting, formatting, and calculating reports through Excel (including manually adding up reports that would have crossed over fiscal years)

Cash Receipts Manual Processes

- Duplicate date entry to enter cash receipts into decentralized standalone systems and to re-enter the information as a Treasury Receipts in ADMINS.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Fixed Assets Manual Processes

- Manual identification of fixed asset purchases based on the expense account number and amount.
- Tracking individual CIP activity/payments in Excel.
- Duplicate tracking of assets in stand-alone systems by many external departments due to the fact that they do not have access to the ADMINS Fixed Asset system. This includes the time spent to record, track/maintain capital assets in external systems, such as the School's Inventory System, the Police Department's Excel spreadsheets, and so on.
- Time spent to distribute reports manually due to the fact that the system cannot distribute electronic reports via e-mail or that external departments cannot run their down departmental asset listings.

- Manual approvals of missing asset write-offs, disposition authorizations, etc.
- Additional time spent to conduct inventory due to the fact that an image of the asset cannot be attached to the asset record in order to facilitate identification.
- Additional time spent to conduct inventory due to the fact that the location of an asset cannot be tracked in ADMINS and the asset record cannot be linked to the GIS system.
- Duplicate recording of fixed asset information (once to create the purchase request and once to record it as a fixed asset in ADMINS
- Tracking of multiple cost centers and/or multiple funding sources (grant/local funding) in association with a single asset.
- Time spent on creating specialized reports in Excel (at year end/for auditors)
- Time spent on researching "linked" assets due to inability to sort and view assets that are associated with each other.
- Time spent on pulling hard copies of PO's/checks/backup for research. (Lack of ability to drill down on-screen to source documents).
- Maintenance of spreadsheet used to record IT equipment purchases, including the cost of equipment, the department it was used for, and the purpose of the purchase.

Grant Management Manual Processes

- Maintenance of Grant Status Checklist (and any other grant related information) in Excel.
- Tracking of sub recipient information for required reports, internal tracking, and reporting in required formats in Excel.
- Use of Excel to balance grant related purchases to reimbursement requests (and other grant related tracking).
- Management of grant eligibility requirements (and other grant related information) in Excel.
- Tracking the scope of services for grants, developing project timelines, and tracking the financial balance of each grant in Excel by the Division of Public Health and Community Services and other departments.
- Using Excel to prepare State reports, the Single Audit Report and other grant reports.
- Tracking of statistical grant information and inventory information in Excel.
- Using Excel to manage grant eligibility information, awarded grants, reimbursement requests, grant budgets and expenditures.
- Maintenance of tickler files in Outlook.
- Manual booking of grant receivables at year end.
- Manual tracking of grants that fund multiple projects and projects that are funded by multiple funding sources.
- Manual tracking of performance measurements, services and accomplishments.
- The preparation of status reports, grant close-out reports, etc. to funding agencies.
- The preparation of billing statements to external funding agencies.
- The monitoring of eligible versus ineligible costs for each grant.
- Time spent in compiling required information due to lack of query/reporting capabilities
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability

to drill down on-screen to source documents).

Contract Management Manual Processes

- Tracking contract detail in Excel by Clerk's Office.
- Manual forwarding of contract for approval.
- Logging and filing of contracts by Clerk's Office.
- Maintenance of information pertaining to bonds, notes and leases in a separate file.
- Time spent tracking down original copies of contracts and amendments by Clerk's Office.
- Manual tracking and posting of retentions to a liability account. In addition, the manual process of cutting physical checks to be deposited into an escrow account (the system should automate the GL entries and should track retentions owed to each contractor so that a physical check does not need to be cut).
- Tracking of individual projects under a master project in Excel.
- Manual tracking of insurance requirements for contractors.
- Time spent referencing invoices back to contracts due to the lack of an integrated Contracts Management module.
- Manual creation of RFP, RFQ, RFI documents.
- Monitoring of contract related ticker dates, such as vendor insurance expiration dates and contract expiration dates.
- Time spent on entering winning bid information into contract database (contract cannot be automatically created from a bid).
- Managing the contract in Excel by department (ensure timely payments, sum of payments do not exceed contract amount, retentions, payment terms, contract compliance (DBE), amendments, contract closeout, etc.).
- Time spent in researching information for historical bid comparison purposes and past vendor performance.
- Notification of open bids to vendors (not electronic); maintenance of hard copy bid documents (as opposed to receiving bids online in electronic format).
- Time spent on sorting, formatting, and calculating reports through Excel.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Purchasing Manual Processes

- Maintenance of Fuel Log in Excel.
- Preparation of hard copy Purchase Requisition Forms by Schools, Police, etc. Duplicate efforts are required to fill out the form and then to enter the same data into ADMINS.
- Completion of hard copy Inventory Supplies Requisition Form and Stationery Supply Requisition Form (rather than direct entry into ADMINS - duplicate efforts).
- Use of Excel on an as-needed basis to track or calculate purchasing information that cannot be maintained within ADMINS.
- Manual routing of purchase requisitions for approval by Schools.

- Manual distribution of purchase orders through either the mail or fax (the system does not have the ability to transmit electronic purchase orders).
- Time spent to carry out manual processes related to change orders, such as emailing AP to request the cancellation of a PR (in the same month it was created) and the limitation that allows for only one change to be made to a PR at a time.
- Manual receiving process - time spent to check off items received on packing slip and submit copy to AP (the system does not allow for electronic receiving).
- Time spent to carry out manual processes related to closing a PO (with open encumbrances after the final payment has been made), including the forwarding of a signed receiving report to AP and the creation of a pseudo warrant number.
- Manually monitoring by departments of blanket spending against their budget to prevent overspending.
- Although the system utilizes an automated approval process, it requires the end user to select the next approver instead of the system being configured to automatically forward requisitions to the next approver based on user defined rules. In addition, approvals based on specific commodity codes, such as IT equipment, require manual approvals.
- Time spent for Purchasing and Accounts Payable to maintain separate vendor databases.
- Time spent researching where a requisition is in the approval queue since the system does not provide visibility on the status of PR's in the approval queue.
- Duplicate efforts in relation to the fact that the system does not provide a relational database for bidders. If the bidder's address needs to be changed, it must be changed once for each of their commodities.
- Time spent obtaining vendor addresses, phone numbers, contact information, obtaining W-9's, etc. due to the fact that the system does not have a vendor self-service technology to allow vendors to complete their information online and have it automatically update the vendor database.
- Tracking returns and backorders.
- Time spent on sorting, formatting, and calculating reports through Excel.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).
- Time spent in researching vendors by commodity.
- Tracking multiple addresses for a vendor.

Inventory Manual Processes

- Use of Excel to track inventory items (Police & Public Works)
- Manual tracking of inventory receipts due to lack of electronic receiving.
- Manual completion of Inventory Requisition Form and Printing Requisition Form.
- Calculation and entry of chargebacks to departments.
- Preparation of physical billings to departments, rather than having the system automatically produce entries to charge departments based on usage.
- Manual tracking of re-order points.
- Time spent to resolve errors that may occur during the processing of inventory

adjustments.

- Manual process of calculating postage consumption and billings.
- Manual routing of internal requisitions for approval.
- Time spent on pulling hard copies of documents/backup for research (Lack of ability to drill down on-screen to source documents).

Payroll Manual Processes

- Tracking of mid-cycle changes to a work schedule.
- Management of the requirements of collective bargaining agreements often requires detailed analysis of pay period data in order to process payroll payments in full compliance.
- Manual retroactive adjustments in order to be compliant with CBA's (breaking apart of pay period data for payroll processing).
- Manual workarounds to process payroll for departments that pay based on a different pay period than the City's normal pay cycle.
- Evaluation of applicable overtime requirements by timekeepers and payroll data entry rather than automation through the Payroll System
- .
- Calculation of taxes based on pay types (i.e. regular pay vs. workers compensation or disability pay) outside of ADMINS.
- Use of spreadsheets and Crystal to compile data from the ADMINS Payroll module and to prepare reports.
- Management of changes to the 8-week cycles required for the firefighters may have to be accomplished outside of ADMINS based on timing issues.
- .
- Workarounds for combining different types of pay with different applicable tax rates (for instance, WC or disability pay combined with sick pay) on the same check.
- Manual calculation of School's WC.
- Manual entry of payroll data from IMC into ADMINS.
- Manual update to tax tables by Central Payroll.
- Tracking and reporting of hours that a teacher works in hard copy format.
- Numerous manual checks issued in relation to late reporting of hours or user errors. (If a user could enter their time into an electronic timecard, it would check for errors and also would expedite the ability to submit time information to Payroll more quickly).
- Manual distribution of payroll checks and direct deposit stubs.
- Time spent by Payroll to process income tax withholding changes, direct deposit elections/changes, to notify employees of leave balances, etc. due to the fact that there are no employee self service functionalities available.
- Calculation of overtime on billings in relation to Plant Operation and School Department charges to outside organizations for overtime worked as a result of renting facilities.
- Manual tracking of hours chargeable to a grant.

- Manual generation of payments that need to be generated to vendors in association with Payroll (lack of automatic transfer of data from Payroll to AP)
- Redistribution of timekeeping hours.
- Tracking schedules and calendaring outside of ADMINS.
- Calculation of substitute teacher's pay.
- Calculation of retroactive leave usage or overtime.
- Manual manipulation required for earnings accumulators.
- Monitoring of storm costs in Excel in order to track expenses and assess the impact on the budget.
- Time spent on pulling hard copies of documents/backup for research (lack of ability to drill down on-screen to source documents).

Personnel Administration Manual Processes

- Monitoring of the evaluation process is done by Excel.
- Manual research of historical personnel transactions through paper files.
- Use of other systems, such as IMC, Access, Excel, etc. to support the tracking of personnel administration data that cannot be maintained within ADMINS.
- Personnel Action Forms are completed in hard copy format.
- Manual forwarding and approval of documents.
- Re-entry of information from an approved personnel action form to the employee record.
- Manual tickler list in order to generate reminders and notifications of upcoming dates.
- Manual tracking of annual performances for sworn officers and civilian personnel by the Police Department.
- Manual tracking of probationary performance evaluations for new hires by the Police Department.
- Manual tracking of employee disciplinary actions or performance improvement plans by the Police Department.
- Manual tracking of annual evaluations by the Schools.
- Reconciliation of School's annual evaluations Excel file to ADMINS.
- Manual tracking of School's statistical data.
- Tracking of market survey data in Excel.
- Tracking of employee performance goals.
- Manual tracking of step and grade calculations.
- Bridging of rehires.
- Time spent on sorting, formatting, and calculating reports through Crystal and Excel.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Training Manual Processes

- Manual process of registering employees for training and retaining copies of the sign-in sheet as validation of attendance.
- Manual tracking of HQTS and the creation of reports on HQTS and teacher's certifications.
- Duplicative efforts to track School training data in both PDS and ADMINS.
- Manual review and management of data in PDS (by Schools) to confirm certification for teachers to meet state and federal requirements.
- Duplicative efforts to track Fire Department training data in both IMC and ADMINS.
- Manual creation/processing of training documentation form, attendance certificate, training certificate in hard copy format by the Police Department.
- Manual routing of documents for approval.
- Use of Excel to maintain a list of certifications for follow up and to track any associated expenses for budgeting purposes (Public Works).
- Manual budget checking for training requests.
- Maintenance of an attendance file in Excel by Public Health.
- Maintenance of legal compliance requirements in hard copy format by Public Health.
- Maintenance of calendars and tickler lists in Outlook.
- Maintenance of course reimbursements for tuition reimbursement programs in Excel.
- Manual generation of checks for tuition reimbursement.
- Manual review for pay changes in order to ensure that union contract requirements are met.
- Tracking of the payment of fees by the City in Excel for budgetary purposes.
- Time spent pulling information from multiple systems, Excel, hard copy documents, etc. rather than being able to extract it from a centralized database.
- Tracking of expiration dates of any licenses or certifications
- Review of each employee's file to ensure compliance with job related requirements.
- Manual creation of letters and notices to employees, training reminder notices, cancellations, etc.
- Time spent on sorting, formatting, and calculating reports through Excel.
- Time spent on pulling hard copies of documents/backup for research (lack of ability to drill down on-screen to source documents).

Timekeeping and Leave Management Manual Processes

- Input of data on manual timecards or in Excel spreadsheets (system does not allow decentralized access to enter time directly into ADMINS, therefore duplicate data entry efforts are required to complete hours on a timecard and then to re-enter the information into ADMINS).
- Time spent to hand carry hard copies of timesheets to Payroll each cycle.
- Input of time into IMC (duplicate data entry) by Police and Fire.
- The use of temporary timekeeping files, which creates duplicate data entry

efforts.

- Use of manual forms, such as the Request for Time Off. Information is entered onto the form and then re-entered into the system.
- Manual approvals for time off, timecards, request for firefighter station/group change, etc.
- Tedious, manual adjustments required to transfer a firefighter in the middle of an 8 week cycle.
- Manual updates to vacation and sick accrual rate changes.
- Manual tracking of employees' time worked outside of their normal department (i.e. DPW snow related work).
- Shifts during winter events may contain multiple rates of pay and cannot be automated. The time worked must be tracked manually to compute the various pay rates which may apply based on rules defined in collective bargaining agreements.
- Manual tracking of pager pay.
- Manual tracking of shared employees between different departments.
- Tracking of FMLA leave and other federal or state mandated leaves in Excel.
- Manual processing of corrections to timekeeping data (employee must complete a new time card or communicate changes to supervisor through e-mail, manual approval, input by Payroll).
- Time spent to track hours funded by a Community Health grant are tracked redundantly in the ADMINS system, in both the payroll timekeeping data and in a separate area accessed by Community Health.
- Time spent confirming employees' leave balances, providing prior timesheet data, reconciling hours paid with hours worked, etc., due to a lack of an employee self-service functionality.
- DPW Foreman tracks time on an Excel spreadsheet to associate the daily work performed with a job or work order.
- Time spent on sorting, formatting, and calculating reports through Excel.
- Time spent on pulling hard copies of documents/backup for research (lack of ability to drill down on-screen to source documents).

Benefits Manual Processes

- Use of Excel to develop reports and perform benefits analysis, including 1) benefit enrollment is tracked by month, 2) track weekly self-funded plan claims, 3) project future working rates and Employer & Employee funding requirements based on benefits paid, 4) project benefit funding requirements based on benefits paid and add in trending factor provided by each vendor, 5) Impact analyzer report (used to provide projections of proposed plan changes), 6) Prorated calculator (used to determine medical/dental cost/deductions for part-time employees), 7) Life insurance calculator (used to determine cost of benefit to employee), 8) Analysis of total medical plan costs vs. amounts collected through working rates (employer/employee) 9) Maintain tracking system for employees paying for benefits while out of work on an unpaid leave.
- Reconciliation of vendor's information to data in ADMINS.
- Manual posting of deductions from retirees NHRS pension checks to the COBRA/RETIREE module of ADMINS.
- Process of manually providing medical and dental vendors up-to-date benefit

information (no electronic transfer of data).

- Process of manually updating retirements since information cannot be interfaced from the retirement system to ADMINS in order to automate the process.
- Time spent to update employee's benefit information for changes to plans, changes in address, new children, etc. since the system does not have an employee self-service functionality.
- Manual benefits analysis due to the fact that the system does not retain historical data.
- Manual manipulation required to create accurate totals for earnings accumulators.
- Corrections to tax deferrals if the change is not processed timely.
- Manual compilation of budgeting information.
- Manual loading of receipts from HR Accounts Receivable to the GL.
- Earnings accumulators require manual manipulation to create accurate totals.
- Manual initiation and approval of enrollments, changes and approvals of benefits forms due to the fact that the system does not have automated workflow technology.
- Manual tracking of certain benefits attributed, such as COBRA and retiree health insurance.
- Manual calculation of retroactive adjustments to deductions, cost sharing, or budgeting.
- Modeling and forecasting of bargaining unit negotiations, budget projections and the net effect (based on various benefit options) performed outside of ADMINS.
- Time spent to create and maintain a second employee master record for payment of LTD benefits.
- Time spent to track and to generate notifications and reminders due to the fact that the system cannot generate notifications based on tickler lists.
- Manual termination of enrollment in an old medical plan when a new benefit plan is signed up for.
- Time spent on sorting, formatting, and calculating reports through Excel.
- Time spent on pulling hard copies of documents/backup for research (lack of ability to drill down on-screen to source documents).

Position Control Manual Processes

- Manual loading of vacant positions to the Budget Information Report.
- Tracking of secondary positions for employees.
- Position control tracking in Excel, such as tracking positions, documenting changes, tracking additions or deletions, funding changes, budgeting, FTE counts, etc.
- Request for a new position is manual as opposed to the ability to complete an electronic requisition.
- Manual processing of requests for new positions for approval.
- Use of Access database to reconcile position control information between ADMINS and each separate school for annual budgeting purposes.
- Calculation of the impact of rank changes on budgeting within the Police

Department.

- Manual update of personnel transactions to the employee's master record.
- Time spent to pull data from various tracking systems and merge it together to meet reporting and analytical requirements.
- Additional time spent tracking seasonal, part time and temporary positions due to the constraints created by the lack of ability to assign a unique identifier to each position.
- Manual tracking of teachers' reclassification or reassignment of position.
- Tracking of positions that are funded for a limited term only.
- Manual research of training and certification information in association with a position.
- Manual research to track a position's historical attributes.
- Manual development of what-if scenarios.
- Manual reconciliation between department data (whether tracked on Excel, in Access database, or IMC) and the Excel spreadsheets maintained by the Finance Department.
- Manual adjustments required to allocate labor across several departments.
- Time spent on sorting, formatting, and calculating reports through Crystal and Excel.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Applicant Tracking Manual Processes

- Tracking of applicants on hard copy forms and re-entry of applicant information into ADMINS as a new-hire record if the applicant is hired.
- Tracking of testing, background checks, etc. outside of ADMINS.
- Use of Excel to maintain applicant data, non-sworn officer positions, etc. for the Police Department.
- Use of Excel spreadsheet to document teachers' interest in various transfer opportunities in order to comply with their collective bargaining agreement.
- Manual tracking of applicants within the Library by the hiring manager.
- Tracking of positions and FTEs by the Police Commissioner in an Excel spreadsheet.
- Documentation of interview notes on paper.
- Manual documentation of the School's hiring process for the Board of Education (for any teaching position that must be nominated).
- Time spent to manually process applicants through approval and hiring stages (no automated workflow processing).
- Use of Excel to track Fire Department positions and other applicant data.
- Manual position control tracking.
- Manual budget monitoring.
- Manual tracking of internal applicants that have expressed interest in job opportunities. The system does not automate the process of looking up internal applicants based on previous applications.
- Manual tracking of special skills/competencies of applicants (system does not

allow specialized skills to be automatically identified during the recruitment process).

- Manual scheduling of applicants for exams, testing, etc. (online calendar not available).
- Maintenance of test scores in Excel.
- Manual generation of e-mails, letters and reminders to applicants.
- Time spent on sorting, formatting, and calculating reports through Excel.
- Time spent on pulling hard copies of documents/backup for research. (Lack of ability to drill down on-screen to source documents).

Non-Financial Benefits

- Alignment of City initiatives and strategic goals
- Improved service to City personnel
- More financial transparency across organizational units
- More efficient processes (i.e. reduction of duplicate data entry, manual spreadsheets and reconciliation of "shadow" systems to core systems)
- Increased automation
- Improved internal controls (through the use of electronic workflow, user-defined approval hierarchy can be automated.)
- Consistent and accurate information
- Access to data in real time
- Improved potential for mining value from financial and administrative data
- Better analytical and reporting tools to facilitate decision making
- More intuitive and user-friendly system
- Increased functionality over the legacy systems
- Intuitive graphical (web-based) user interface
- More seamless integration between departments
- Improved system security that will be compliant with government regulations
- Provides a simplified, unified technology platform
- Reduced need for extracts (flat files that support subsidiary systems)

11. PROPOSED SOLUTIONS / RECOMMENDATIONS

OUR APPROACH

Schafer Consulting's approach to the assessment project involved several systematic steps: a detailed needs assessment, a "gap analysis", the development of a Business Case, and a recommendation to either maintain the current systems or move ahead with procuring new integrated systems. The detailed needs assessment review defined the City's existing systems, activities, processes, users, reports and controls in all the major functional areas of finance, human resources and payroll. This process helped us to identify the current and future needs of the City that are not being met by the existing systems. The results were documented using a combination of narrative reports and Visio flowcharts (Please refer to Appendix A.)

The specific steps we followed in conducting the needs assessment review included:

- Gathering and reviewing relevant documentation, including the chart of accounts, most recent adopted budget, most recent annual report, sample forms, sample reports, etc;
- Facilitating needs assessment workshops with cross-organizational functional team members to better understand their processes, responsibilities, inputs, outputs, and controls;
- Defining the current systems' constraints and analyzing against the constraints gathered by the internal staff;
- Conducting workshops to prepare Visio diagrams that describe the interdependencies of the various business processes at the City and how each integrate with others in relation to common data and functional attributes;
- Identifying improvements to existing procedures and business processes.

Our approach also included a comparison between the City's current "as-is" state and its desired state. The gap represents the quantitative difference between where the City is and where the City could be. Our analysis helps decision makers quantify and evaluate the significance of that operating gap (please refer to Appendix B of the Business Case.)

The specific steps we followed in conducting the gap analysis included:

- Providing requirements matrix templates to the City
- Facilitating workshops with cross-organizational functional team members to ascertain their feelings/perceptions on how well the current systems are meeting their needs and how important each feature is to them in a new or upgraded system.
- Updating the requirements matrices after incorporating input from team members
- Quantifying results

EXPLANATION OF THE GAP ANALYSIS SUMMARY

We developed Requirements Definition Matrices for each functional module in order to assist the City in analyzing the gaps between the current systems and a future solution.

For each requirement or feature, the City's functional team members were asked to rate their current system on a scale of 0 to 3, where "0" indicates that the feature does not exist and "3" indicates the feature exists and performs above average (the City interpreted "above average" to mean the following: users like the feature; it makes their job easier; they would have to work harder if that feature did not exist.) The team members also used the 1 to 3 scale to rate how important that feature would be to them in a new system. A "0" score indicates the City does not need the feature in the future, and a "3" indicates that it is a high priority need (i.e. the City must have it in order for the employees to perform their job.) The current and future scores were then compared to each other to provide an indication of what is lacking from the current systems. If the team determined that a feature did not exist ("0") but it was a "High Priority Need" ("3") in a new system, the feature was given a maximum gap score of "10". However, if the team scored the current system as a "0" and the future system as a "1", "Low Priority Need", it was scored as a gap of "2", indicating that its lack of functionality was not a critical concern. Using the same gap analysis concept, if the current system scored a "3" (i.e. performs above average) and the future need is high, then there would be no gap at all. The formula used to calculate the gap ratings is based on a mathematical computation that analyzes differences between the current state and the future needs.

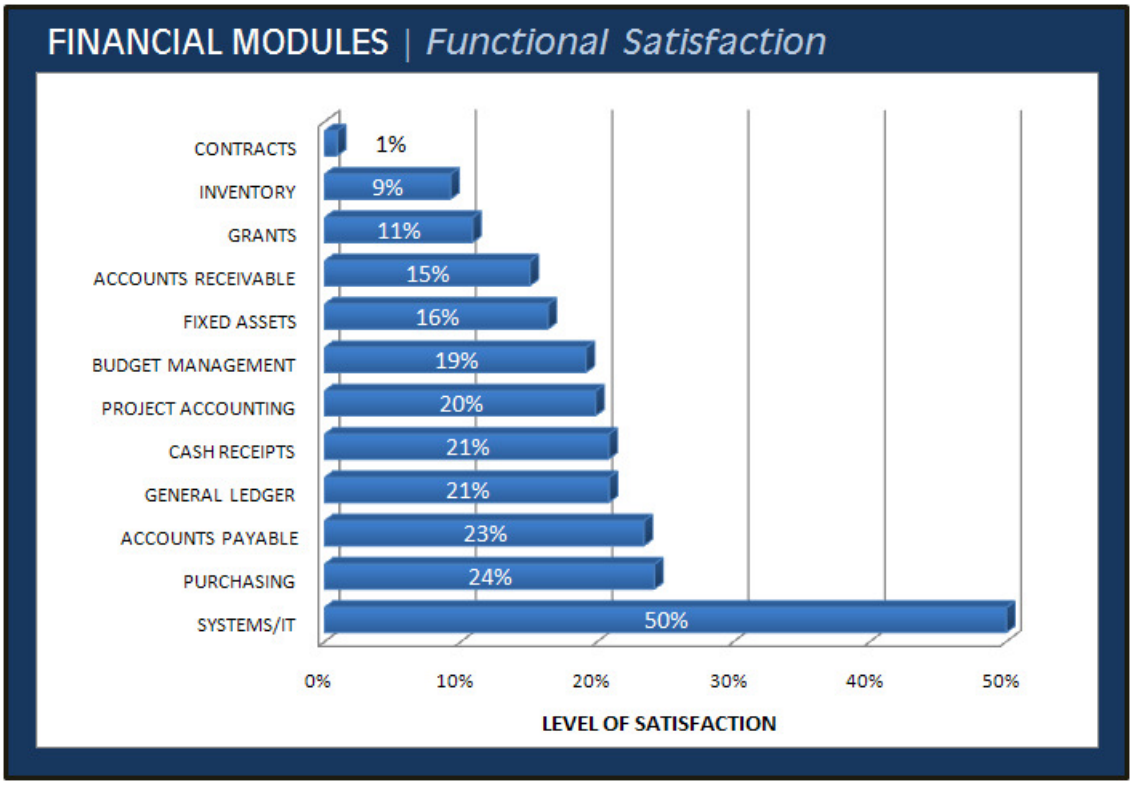
The Gap Analysis Summary presented below indicates satisfaction and gap percentages by functional area based upon the current satisfaction and future priority scores:

		AVERAGE RATINGS				# OF REQUIREMENTS		
FUNCTIONAL AREA	# of Requirements	Current Satisfaction (0-3)	Future Priority (0-3)	Gap %	Satis-faction %	☺	😐	☹
FINANCIAL MODULES								
ACCOUNTS PAYABLE MANAGEMENT	86	0.69	2.93	77%	23%	13	7	66
ACCOUNTS RECEIVABLE MANAGEMENT	59	0.44	2.93	85%	15%	8	59	50
BUDGET MANAGEMENT	64	0.56	2.94	81%	19%	2	9	53
CONTRACTS MANAGEMENT	80	0.03	2.78	99%	1%	6	3	71
CASH RECEIPTS	32	0.63	3.00	79%	21%	2	5	25
FIXED ASSETS	55	0.48	2.95	84%	16%	3	8	44
GRANTS ACCOUNTING	114	0.33	3.00	89%	11%	0	12	102
GENERAL LEDGER MANAGEMENT	85	0.62	2.97	79%	21%	3	14	68
INVENTORY MANAGEMENT	83	0.24	2.61	91%	9%	11	14	58
SYSTEM MECHANICS / INFORMATION TECHNOLOGY	285	1.45	2.89	50%	50%	108	34	143
PROJECT/ACTIVITY	49	0.59	2.98	80%	20%	3	4	42
PURCHASING MANAGEMENT	116	0.69	2.85	76%	24%	21	10	85
Financial Area Averages	**1108**	**0.56**	**2.90**	**81%**	**19%**	**180**	**179**	**807**

FUNCTIONAL AREA	# of Requirements	AVERAGE RATINGS: Current Satisfaction (0-3)	AVERAGE RATINGS: Future Priority (0-3)	AVERAGE RATINGS: Gap %	AVERAGE RATINGS: Satis-faction %	# OF REQUIREMENTS: ☺	# OF REQUIREMENTS: 😐	# OF REQUIREMENTS: ☹
HUMAN RESOURCES / PAYROLL MODULES								
APPLICANT TRACKING	108	0.49	2.69	82%	18%	16	19	73
BENEFITS	215	1.22	2.68	54%	46%	56	77	82
LEAVE MANAGEMENT	63	1.49	2.94	49%	51%	13	25	25
PERSONNEL	181	1.11	2.83	61%	39%	38	54	89
POSITION CONTROL	105	0.38	2.93	87%	13%	7	10	88
PAYROLL	246	2.03	2.82	28%	72%	126	77	43
TIMEKEEPING	142	0.44	2.82	85%	15%	9	3	130
TRAINING	104	-	2.85	100%	0%	4	7	93
Averages	**1164**	**0.90**	**2.82**	**68%**	**32%**	**269**	**272**	**623**

FUNCTIONAL AREA	# of Requirements	AVERAGE RATINGS: Current Satisfaction (0-3)	AVERAGE RATINGS: Future Priority (0-3)	AVERAGE RATINGS: Gap %	AVERAGE RATINGS: Satis-faction %	# OF REQUIREMENTS: ☺	# OF REQUIREMENTS: 😐	# OF REQUIREMENTS: ☹
OTHER SYSTEMS								
UTILITY BILLING	152	1.22	2.16	44%	56%	82	25	45
LICENSING AND PERMITTING	373	0.93	2.71	66%	34%	123	46	204
ELECTRONIC CONTENT MANAGEMENT SYSTEM	155	0.17	2.33	93%	7%	20	66	69
Averages	**680**	**0.77**	**2.40**	**67%**	**33%**	**225**	**137**	**318**

- Functional Area – This column identifies the functional area reviewed with the City.
- Items - the number of requirements that were identified for that functional area.
- Current – This column represents the average score of how well, from a scale of 0 to 3, the users are satisfied with their current systems for that functional area.
- Future – This column shows the average score, on a scale of 0 to 3, of how relevant the requirements were to the users for that functional area.
- Satisfaction Percentage – This column calculates how well the requirement of the current system measures up to what users would like to have available to them. 100% would mean that the users are completely satisfied with their current systems, whereas a 0% means the users are not satisfied at all.
- Gap Percentage – This column shows the reverse of the satisfaction percentage. The bigger the percentage, the greater is the current gap.
- The “Face columns show how many questions fell into groups of “Satisfied,” “Neutral,” and “Dissatisfied” for each functional area.


FINANCIAL MODULES | Functional Satisfaction
CONTRACTS
INVENTORY
GRANTS
ACCOUNTS RECEIVABLE
FIXED ASSETS
BUDGET MANAGEMENT
PROJECT ACCOUNTING
CASH RECEIPTS
GENERAL LEDGER
ACCOUNTS PAYABLE
PURCHASING
SYSTEMS/IT
1%
9%
11%
15%
16%
19%
20%
21%
21%
23%
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0%
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20%
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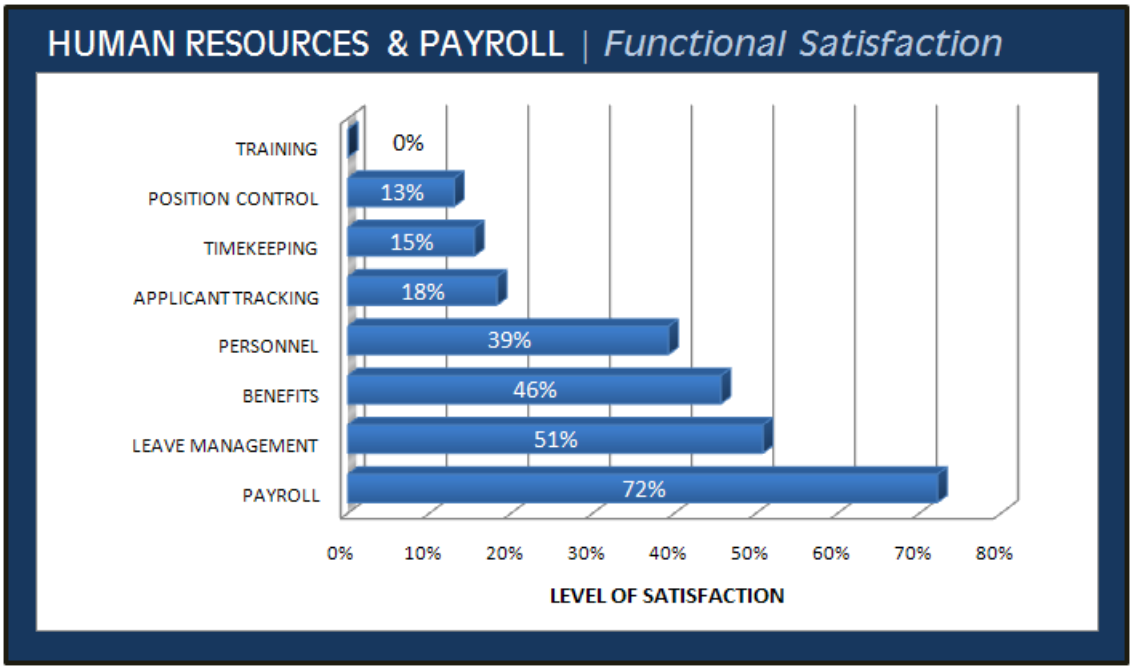
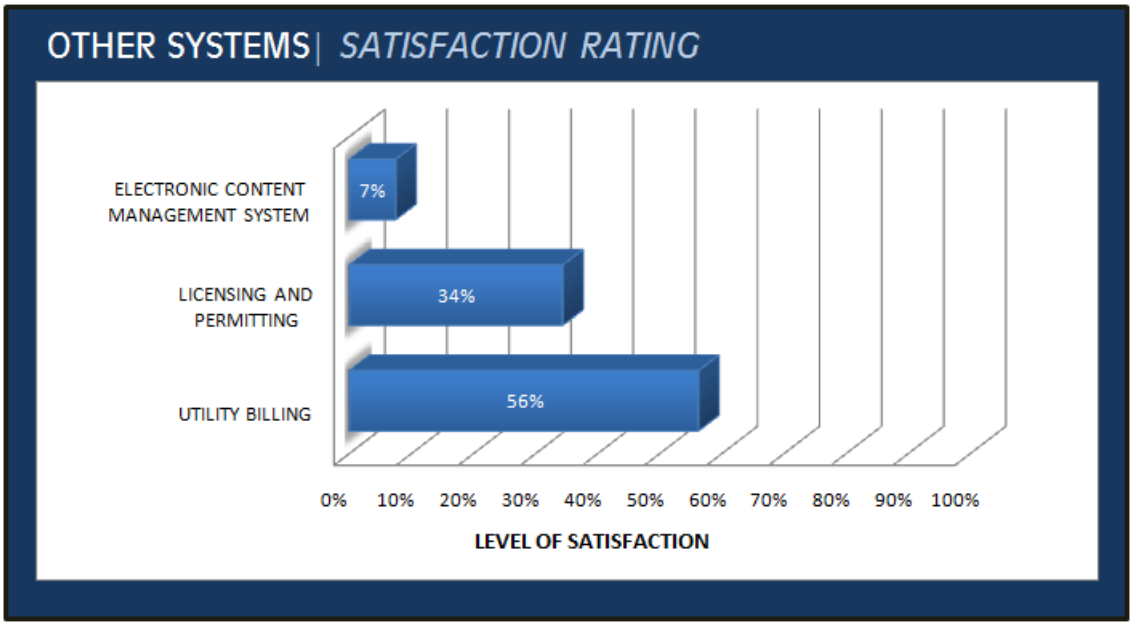
40%
50%
LEVEL OF SATISFACTION


HUMAN RESOURCES & PAYROLL | Functional Satisfaction
TRAINING
POSITION CONTROL
TIMEKEEPING
APPLICANT TRACKING
PERSONNEL
BENEFITS
LEAVE MANAGEMENT
PAYROLL
0%
13%
15%
18%
39%
46%
51%
72%
0%
10%
20%
30%
40%
50%
60%
70%
80%
LEVEL OF SATISFACTION



The graphs indicate that employees who are responsible for the fiscal activities of the City are not equipped to carry out the majority of their key tasks using the existing systems. The high Human Resources/Payroll gap ratings reflect that the current system does not provide any of the functionalities or automation that are necessary to track employee training. The other areas of Human Resources/Payroll did not fare much better, with an average gap of 68% overall.

On the core financials side, Contracts Management topped the chart with a near completely dissatisfied rating of 99%. Inventory, Grants, Accounts Receivable, Fixed Assets, Budget Management and Project Accounting all realized gaps over 80% gap, while General Ledger, which is the core of all financial activities, scored a staggering gap percentage of 79%. The gaps for the remaining categories were all above 75% with the Systems Mechanics/Information Technology area receiving the lowest gap rating of 50%.

Systems related to Licensing and Permitting are unable to meet 66% of users' needs. Utility Billing systems fared much better with an overall satisfaction rating of 56%. ECMS had the lowest user satisfaction rating with a percentage of only 7%.

Based on these results, we have identified three possible solutions to consider, along with their associated pros, cons and risks:

- Option 1 – Status Quo
- Option 2 – Upgrade ADMINS
- Option 3 – Build a Customized ERP System
- Option 4 - Replace ADMINS with Commercial Off the Shelf (COTS) ERP Software

OPTION 1 – STATUS QUO
Description of the Option:
The City does not take any action to upgrade or replace its existing systems.
Pros:

- No need to appropriate any funds for new technology
- City employees are familiar with their existing systems and processes
- No disruption of current business operations
- Current environment is relatively stable and easy to maintain
- No implementation risks involved
- Contains historical data that may be difficult or costly to integrate to a new system

Cons:

- Continue to face technological inefficiencies and constraints
- Current hardware will reach its end of life by late 2009. If spare parts are not available and if critical server parts fail, the entire system would crash with no restore options.
- Current application will reach its end of life by 2012. It would be too late to start the replacement process by then, as the estimated time from the requirements gathering phase to system "go-live" is estimated to take up to 3 to 5 years.
- Data integrity caused by many processes performed outside of the main systems.
- Maintenance of fragmented systems
- Software limitation and data integration issues in existing environment
- Lack of reports and real-time data for decision makers
- Inability to benefit from the advantages of integrated systems and new technologies
- Inefficiencies caused by redundant and manual processes
- Lack of user friendliness and ease of navigation and user interface
- Higher operating costs over time
- Lack of functional or technical documentation
- Fewer programmers available to support and maintain legacy systems

Risks:

- Modifications/enhancements to support new business requirements or new government regulations will become more difficult and expensive due to older technologies
- Increasing difficulty in maintaining compliance with FLSA and FMLA regulations
- Inability to properly exercise fiduciary responsibilities due to lack of budgetary control and reporting tools
- Limitations on existing systems will continue to encourage employees to take matters into their own hands by creating independent "shadow" applications such as spreadsheets and relational database programs. The proliferation of these independent "shadow" applications include:
  - Difficulty in sharing, accessing, and analyzing information
  - Conflicting information
  - Possible knowledge transfer gaps due to employee attrition
  - Hidden costs of duplicate data entries and consolidations
- Recruiting IT staff to support obsolete technology will become more difficult and

would be counter productive

OPTION 2 – UPGRADE ADMINS
Description of the Option:
The City upgrades to ADMINS for Windows to achieve enhanced functionality and to mitigate the risk of obsolescence. Under this option, the City will migrate its current customizations to the new Windows environment.
Pros:
• The investment of $125K to upgrade to ADMINS for Windows is minimal compared to full system replacement. • The disruption to City operations will be minimal • City IT personnel and ADMINS users are already familiar with ADMINS • Implementation risk is minimal compared to full system replacement • Implementation would consume less time and resources compared to full system replacement.
Cons:
• ADMINS Inc., the software company that developed ADMINS is no longer competing against other ERP vendors in the market place. This may indicate several things - their business focus has changed, they are maintaining support for only existing customers or they have determined it is cost prohibitive to compete effectively. • This option does not address the immediate hardware and software obsolescence crisis. • This is a band aid solution to merely *delay* technology upgrade, but many of the constraints and frustrations facing City employees will still exist. • Upgrading to ADMINS will only address the obsolescence issue, and the City will still need to continue maintaining fragmented systems • Software limitation and data integration issues will continue to exist. • Users may still experience problems with reporting and gaining access to real-time data. • The City will not be able to fully benefit from the advantages of integrated systems and new technologies. • Inefficiencies caused by redundant and manual processes will continue to exist. • Higher operating costs over time
Risks:
All the risks identified under Option 1 will apply to this option. In addition, users may feel frustrated to be trained on ADMINS for WINDOWS knowing that it is merely a temporary solution.

OPTION 3 – BUILD A CUSTOMIZED ERP SYSTEM
Description of the Option:

The City hires programmers to develop a new ERP system in-house, using the City's detailed specifications that reflect its business processes.

Pros:

- The system can be specifically designed for the City's requirements and can be tailored to fit the way that the City conducts its business. The actual users can describe their workflow in detail and as a result, the software can be more effectively designed to increase user efficiency.
- The system can be customized to interface with other software that the City operates with the potential to provide the City with a fully integrated IT infrastructure across the entire organization.
- Once the software is developed, the IT Department will be familiar with users' work processes and they will be better suited to provide the best technical support by understanding common issues, traps and workarounds.
- Users may find it easier to use as the system should not contain unnecessary fields or functionalities designed for a more generic customer base.
- The software and code will be owned by the City, which will afford more control over future enhancements so the software can change as the City's business changes.
- Users may be more readily accepting of the new system since they will have had input into its design. They may also require less training because of their involvement during development.
- Investment dollars will be wisely spent on the functions that the City actually needs to improve its processes.
- No annual maintenance fees required.
- No licenses required.

Cons:

- The development period can be quite lengthy as City project team has to create detailed program specifications for each business process and function.
- Dependency on the IT Department will increase.
- Version control can be difficult.
- Specifications may not incorporate best business/government practices that typically come with a COTS.
- The total cost of investment may be higher due to longer deployment period.
- Ongoing cost to support enhancements, upgrades, debugging and documentation may be higher.
- Requires detailed documentation for initial development and ongoing modifications.
- Requires continued trouble shooting and debugging.
- As COTS solutions continue to improve in the market place, City programmers will always need to be in a "catch up" mode to refine and improve the system.
- Custom built systems are typically ideal for those organizations who are not flexible or willing to change their business processes.
- Will need to hire additional programmers to support the software development efforts.
- No feedback from other customers and user groups.

Risks:

- The City will become highly dependent on its programmers as they become the sole resources of the system. If system specifications and detailed documentations are not

maintained, and if stable staff retention is not achieved, this could pose great risks to the ongoing support of the system.
- Approximately 40% of custom "build" solutions are abandoned.
- Only about 16% of custom "build" solutions are completed on time and within budget. Most of these solutions were limited to a few functional areas, not for a full suite of applications.
- If the software is not developed to professional standards, it may be unstable, unreliable and may contain bugs.
- Employee fatigue may occur if the development/implementation period is dragged out for too long.
- The cost for architecting/designing, development, documentation, testing, deployment, support, maintenance and integration of a custom built system is difficult to estimate; this uncertainly will create a budget challenge for the City
- It is difficult to determine how easy it will be to correct, adapt and enhance the system.
- If the customer build is done poorly, a lot of time and money may ultimately be spent on software that does not meet the City's requirements.
- There may be internal conflicts or a lack of agreement on design specifications.
- Projects schedule will be more difficult to estimate and manage as there are no historical statistics to compare against. This could lead to cost overruns and project delays.

OPTION 4 – REPLACE CURRENT ERP SYSTEM WITH COTS ERP SOFTWARE SOLUTION

Description of the Option:

Initiate RFP processes to replace the current ERP system. The City should also expand the ERP replacement efforts to include an ECMS as well as a Licensing and Permitting System. An ERP solution alone will not eliminate all of the City's redundant and paper-intensive processes. The City should prepare three separate RFPs to complete its objectives under the umbrella of the ERP project; one for an ERP solution, one for an ECMS and one for a Licensing and Permitting System.

Pros:

- This is the only solution that adequately addresses the City's immediate hardware and software obsolescence crisis.
- All of the core financial, budget, human resources and payroll activities within the City will be integrated.
- Single vendor for all financial, budget, human resources and payroll systems.
- Single vendor for all Licensing and Permitting Solutions.
- A City-wide Content Management solution to capture, maintain, store, access, dispose of and preserve electronic records, including those generated from the ERP and Licensing and Permitting systems.
- Ensure preservation of electronic records of historical and information value.
- Eliminate many paper intensive processes.
- Reduce document storage facilities as most of these documents will be converted and stored in an electronic format.
- Improved user interfaces with a consistent look and feel of the systems throughout the

entire organization.

- Ability to utilize state of art technologies (Microsoft plug-ins, audit trails, drill down/drill around capabilities for reporting and inquiry, workflow, imaging, internet based tools, e-procurement, e-recruiting, self service, etc.) across the entire organization.
- Users have given the current systems an overall satisfaction rating of only 32%, which implies that the satisfaction level is astoundingly low. Some areas, such as Contract Management, Grants, Accounts Receivable, Budget Management, Project Accounting, Training, Timekeeping, Applicant Tracking, Licensing and Permitting, and Position Control produced even lower results. The purchase of new systems will address the gaps identified in these areas.
- Reduce or eliminate the use of spreadsheets, Access databases and other processes performed outside of the current systems.
- Automate payroll, timekeeping, personnel, benefits, leave management and other human resources functions by having full integration between Human Resources modules and Payroll.
- Reduce hard copy forms, certificates, timesheets, personal action forms, etc.
- Improved data integrity
- Financial data presented in real time
- Improved reporting tools
- Standardization of processes throughout the entire organization
- Ensure the City exercises its fiduciary responsibility to the public and to its employees.

Cons:

- Require an upfront cash outlay of $7.5 million, approximately 50% of which is expected to be expended during FY2010, 44% during FY2011, and 6% thereafter. May disrupt normal City operations anywhere from 3 to 5 years.
- Require resource commitments by the City.
- May require complete process re-engineering based on best practices for government organizations.
- May require additional training for the IT staff in order to support and maintain the new systems.

Risks:

All the risks identified under the Risk Section of the Business Case will apply to this option.

NEXT STEP, SUMMARY AND CONCLUSION:

As a result of the detailed analysis of the City's current systems and evaluation of the pros and cons of each option, it is the recommendation of Schafer Consulting that the City pursue Option 4. The next steps to be taken are: 1) determine the timing and strategy of issuing the 3 RFPs (i.e. ERP, ECMS, and Licensing and Permitting), 2) evaluate various funding options, and 3) prepare a high level project work plan to address a phased-in approach and to identify key milestones.

The software RFPs should provide detailed information about the City, including the needs assessment reports and requirements matrices developed by Schafer Consulting; the scope of the project; the projected timeframe; instructions on how to prepare the proposal, evaluation criteria and the location and expected size of the user base. The vendors are then expected to develop a technical and a cost proposal to address the requested items in the RFPs. Shortlisted vendors will be asked to conduct onsite software demonstration of their products based on a set of demo scripts to be provided by the City. This will allow the City to objectively evaluate the same functionalities presented by each vendor. The advantages of going through a formal RFP process include:

- It provides the City with accurate costs
- It provides the City with the opportunity to quantitatively measure the gap between the requirements identified by the functional team members against what is offered in each vendor's software solution.
- It documents concrete results based on scripted scenarios that reflect the City's business processes.
- It promotes team spirit as the feedback and input from project team members are properly addressed.
- It requires a fair and objective selection process that will prevent anyone from feeling disenfranchised (as the ultimate decision will be made by the group and not by certain individuals).
- It allows the selection results to be systematically quantified and justified.

The City's Business Process Resources (e.g. those who have already participated in the initial needs assessment project) should exercise the same level of due diligence in the evaluation and selection of a software solution.

The incremental cost of issuing these RFPs has been significantly reduced since most of the ground work of identifying the needs, documenting the "as-is" environment and preparing process flow diagrams has already been completed. As mentioned earlier, these documents will be included in the RFPs to provide the vendors as much information as possible in order to solicit the most accurate costs. However, if the City postpones the RFP process, some of the requirements and current processes may change, which would necessitate the need for re-documentation. This would in turn increase the cost of the project.

In summary, the conclusion of our Business Case indicates that employees who work with the current systems are relying on inefficient processes to complete their day-to-day tasks due to both system constraints, and to some extent, operational constraints. Employees must frequently work around the system instead of working with it. Furthermore, there are staggering gaps between the features that users have stated they need in a financial system as compared to what the current systems can provide. *These results indicate that it is not so much a matter of whether or not the City should move forward with replacing the current systems, but rather when.* Because we estimate that it will require approximately 3 years from the time the City issues the RFP to system go-live, it is paramount that the City start the planning process as soon as possible in order to reduce many of the risks that we have identified in the needs assessment reports and the Business Case. Please see the suggested timeline below:

EVENT	DATE
City Approves Project	6/22/2009
Notice to Proceed with the Evaluation	7/7/2009

EVENT	DATE
Process	
Complete and Release Software RFP	7/31/2009
Complete the Evaluation of Software Solutions	9/17/2009
Complete Contract Negotiation	11/17/2009
Notice to Proceed with the Implementation	12/15/2009
Financial Go-Live	3/7/2011
HR/Payroll Go-Live	4/1/2011
Utility Billing	5/2/2011
Licensing & Permitting	1/31/2012
Electronic Content Management	2/24/2012

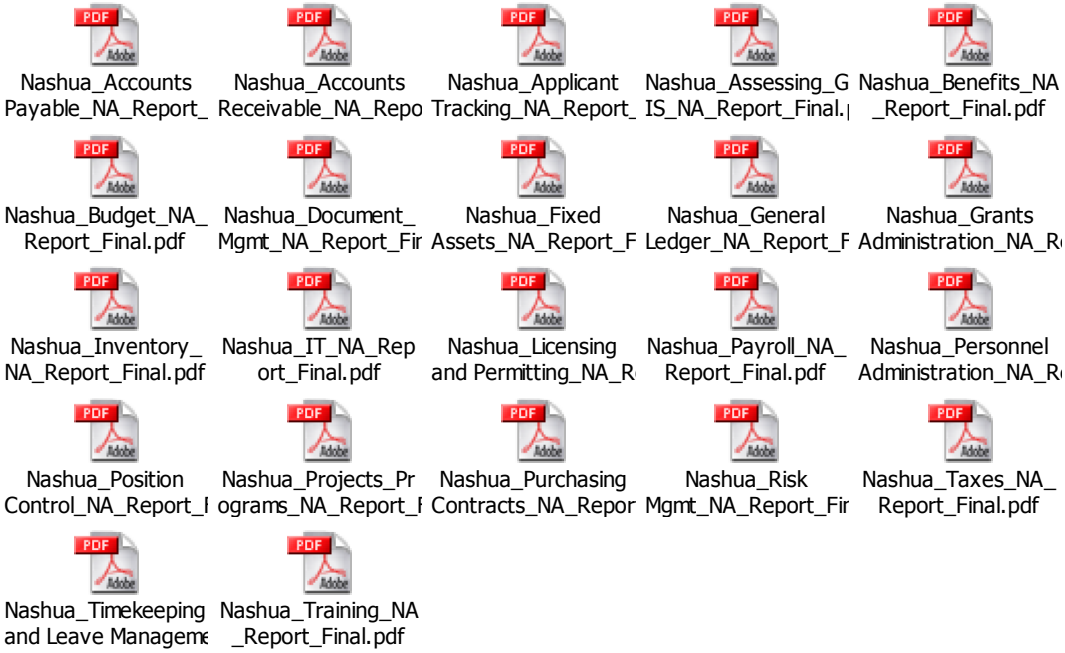
As a part of this Business Case, we have provided sufficient information to allow the project Executive Sponsors and other key stakeholders to review and comment on the:

- Project objectives
- Organizational impact and the risks associated with this project
- Documentation of existing processes and the corresponding constraints
- Gap analysis
- Cost/benefit analysis for each available option
- Pros, cons and risks associated with each available option
- Key performance indicators to measure success

The Executive Sponsors must champion the project in order to make it successful. Their actions and communication help promote the benefits of the project, maintain the project credibility and momentum, and provide commitment and support throughout the organization. Without such project championship, the project could be adversely impacted in the following ways:

- Key business decisions may not be made on a timely basis
- Lack of a shared vision of the organization and the role of the new system.
- Resources may be allocated to other competing projects
- The project may not be treated as a top priority by the organization
- Lack of mediation between conflicted parties.
- Objectives may not be aligned with the City's strategic priorities.
- The right message regarding the project may not be properly conveyed to the employees and elected officials
- Lack of financial responsibility and project ownership
- Lack of encouragement for employee involvement and cooperation.
- Project obstacles may not be removed on a timely basis

12. APPENDIX A – NEEDS ASSESSMENT REPORTS



13. APPENDIX B – REQUIREMENTS MATRICES